

**BEFORE THE  
SOUTH CAROLINA PUBLIC SERVICE COMMISSION**

**IN THE MATTER OF:  
APPLICATION OF SOUTH CAROLINA  
ELECTRIC AND GAS COMPANY FOR AN  
INCREASE IN ITS ELECTRIC RATES  
AND CHARGES**      **} DOCKET NO. 2002-223-E**

**DIRECT TESTIMONY AND EXHIBIT  
OF  
DAVID C. PARCELL**

**ON BEHALF OF THE  
SOUTH CAROLINA CONSUMER ADVOCATE  
AND  
SOUTH CAROLINA MERCHANTS ASSOCIATION**

**November 8, 2002**

## **TABLE OF CONTENTS**

	<b><u>PAGE</u></b>
<b>I. Introduction.....</b>	<b>1</b>
<b>II. Recommendations and Summary.....</b>	<b>3</b>
<b>III. Economic/Legal Principles and Methodologies.....</b>	<b>5</b>
<b>IV. General Economic Conditions .....</b>	<b>10</b>
<b>V. SCE&amp;G's Operations and Risks.....</b>	<b>14</b>
<b>VI. Capital Structure and Costs of Debt and Preferred Stock .....</b>	<b>18</b>
<b>VII. Selection of Comparison Groups.....</b>	<b>23</b>
<b>VIII. Discounted Cash Flow Analysis.....</b>	<b>24</b>
<b>IX. Capital Asset Pricing Model Analysis.....</b>	<b>28</b>
<b>X. Comparable Earnings analysis .....</b>	<b>32</b>
<b>XI. Return on Equity Recommendation.....</b>	<b>37</b>
<b>XII. Total Cost of Capital.....</b>	<b>38</b>
<b>XIII. Comments on Company Testimony .....</b>	<b>39</b>

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5                   **DIRECT TESTIMONY AND EXHIBIT**

6  
7                   **OF**

8  
9                   **DAVID C. PARCELL**

10  
11  
12   **I.     INTRODUCTION**

13  
14   **Q.     PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.**

15   A.     My name is David C. Parcell. I am Executive Vice President and Senior Economist of  
16           Technical Associates, Inc. My business address is Suite 601, 1051 East Cary Street,  
17           Richmond, Virginia 23219.

18  
19   **Q.     PLEASE DESCRIBE YOUR BACKGROUND AND EXPERIENCE.**

20   A.     I hold B.A. (1969) and M.A. (1970) degrees in economics from Virginia Polytechnic  
21           Institute and State University (Virginia Tech) and a M.B.A. (1985) from Virginia  
22           Commonwealth University. I have been a consulting economist with Technical  
23           Associates since 1970. The large majority of my consulting experience has involved the  
24           provision of cost of capital testimony in public utility ratemaking proceedings. I have  
25           previously testified in about 350 utility proceedings before more than 30 regulatory  
26           agencies in the United States and Canada. Schedule 1 contains a more complete  
27           description of my education and professional experience.

28  
29   **Q.     WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

30   A.     I have been retained by the South Carolina Consumer Advocate and South Carolina  
31           Merchants Association (comprised of all major grocery chains) to evaluate the cost of  
32           capital aspects of the current rate increase filing of South Carolina Electric & Gas  
33           Company ("SCE&G"). I have performed independent studies and am making a

1 recommendation of the current cost of capital for SCE&G. Since SCE&G is a subsidiary  
2 of SCANA Corp. ("SCANA"), I have also examined this entity in my analyses.  
3

4 **Q. HAVE YOU PREPARED AN EXHIBIT IN SUPPORT OF YOUR TESTIMONY?**

5 A. Yes, I have prepared one exhibit, identified as Schedule 1 through Schedule 15. This  
6 exhibit was prepared either by me or under my direction. The information contained in  
7 this exhibit is correct to the best of my knowledge and belief.  
8

9 **Q. HOW IS YOUR DIRECT TESTIMONY ORGANIZED?**

10 A. My testimony is organized into thirteen parts as follows:

- 11 I. Introduction
- 12 II. Recommendations and Summary
- 13 III. Economic/Legal Principles and Methodologies
- 14 IV. General Economic Conditions
- 15 V. SCE&G's Operations and Risks
- 16 VI. Capital Structure and Costs of Debt and Preferred Stock
- 17 VII. Selection of Comparison Groups
- 18 VIII. Discounted Cash Flow Analysis
- 19 IX. Capital Asset Pricing Model Analysis
- 20 X. Comparable Earnings Analysis
- 21 XI. Return on Equity Recommendation
- 22 XII. Total Cost of Capital
- 23 XIII. Comments on Company Testimony

1 **II. RECOMMENDATIONS AND SUMMARY**

2  
3 **Q. WHAT ARE YOUR RECOMMENDATIONS IN THIS PROCEEDING?**

4 A. My overall cost of capital recommendation for SCE&G is follows:

5  
6

	<u>Percent</u>	<u>Cost</u>	<u>Return</u>
Long-Term Debt	42.82%	7.23%	3.10%
Short-Term Debt	2.59%	1.81%	0.05%
Preferred Stock	4.37%	6.80%	0.30%
Common Equity	<u>50.22%</u>	10.00-11.00%	<u>5.02-5.52%</u>
Total	100.00%		8.46-8.96%

11

12 SCE&G's application requests a return on equity of 12.5 percent and a total cost of  
13 capital of 7.78 percent.  
14

15 **Q. PLEASE SUMMARIZE YOUR ANALYSES AND CONCLUSIONS.**

16 A. This proceeding is concerned with SCE&G's regulated electric utility operations in South  
17 Carolina. My analyses are concerned with SCE&G's total cost of capital. The first step  
18 in performing these analyses is the development of the appropriate capital structure.  
19 SCE&G's proposed capital structure is its adjusted March 31, 2002 consolidated capital  
20 structure ratios of 43.96 percent long-term debt, 4.48 percent preferred stock, and 51.56  
21 percent common equity. I have modified these capital structure ratios to include short-  
22 term debt in my cost of capital analyses.  
23

24 The second step in a cost of capital calculation is a determination of the embedded cost  
25 rates of long-term debt, preferred stock and short-term debt. I have used the 7.23 percent  
26 cost of long-term debt and 6.80 percent cost rate of preferred stock proposed by SCE&G.  
27 For the cost of short-term debt, I use the current 1.81 percent cost of short-term debt for  
28 SCE&G.  
29

1 The third step in the cost of capital calculation is the estimation of the cost of common  
2 equity. I have employed three recognized methodologies to estimate the cost of equity  
3 for SCE&G. Each of these methodologies is applied to a group of comparison electric  
4 utilities and the group of proxy companies analyzed by Company witness Malkiel (as  
5 developed by Company witness Osborne). These three methodologies and my findings  
6 are:

<u>Methodology</u>	<u>Range</u>
Discounted Cash Flow	10½-11 %
Capital Asset Pricing Model	10 -10½%
Comparable Earnings	11%

11  
12 Based upon these findings, it is my conclusion that the cost of common equity for  
13 SCE&G is a range of 10 percent to 11 percent. My analyses of SCE&G's business and  
14 financial risks indicate this Company has average risk compared to other electric utilities  
15 and the comparison groups. As a result, my recommendation of the fair cost of common  
16 equity for SCE&G is this same range, or 10 percent to 11 percent. My recommended  
17 point estimate is the mid-point of this range, or 10½ percent.

18  
19 Combining these three steps into weighted costs of capital results in an overall rate of  
20 return of 8.46 percent to 8.96 percent, with a mid-point of 8.71 percent.

21  
22 My return on equity recommendation of 10 percent to 11 percent compare to the  
23 12½ percent return on equity recommendation of SCE&G witness Malkiel. This is based  
24 on a DCF model result (12.3 percent) which relies exclusively on analysts' forecasts of  
25 earnings per share and a flotation cost adjustment of 0.2 percent. In my testimony, I  
26 demonstrate that exclusive reliance on analysts' forecasts is not a proper way to estimate  
27 the growth component in a DCF context. I also demonstrate that a flotation cost  
28 adjustment is not appropriate.

1 **III. ECONOMIC/LEGAL PRINCIPLES AND METHODOLOGIES**

2  
3 **Q. WHAT IS YOUR UNDERSTANDING OF THE ECONOMIC AND LEGAL**  
4 **PRINCIPLES WHICH UNDERLIE THE CONCEPT OF A FAIR RATE OF**  
5 **RETURN FOR A REGULATED UTILITY?**

6 A. Rates for regulated public utilities have traditionally been primarily established using the  
7 "rate base - rate of return" concept. Under this method, utilities are allowed to recover a  
8 level of operating expenses, taxes and depreciation deemed reasonable for rate setting  
9 purposes, and are granted an opportunity to earn a fair rate of return on the assets utilized  
10 (i.e., rate base) in providing service to their customers. The rate base is derived from the  
11 asset side of the utility's balance sheet as a dollar amount and the rate of return is  
12 developed from the liabilities/owners' equity side of the balance sheet as a percentage.  
13 The rate of return is developed from the cost of capital, which is estimated by weighting  
14 the capital structure components (i.e., debt, preferred stock, and common equity) by their  
15 percentages in the capital structure and multiplying these by their cost rates. This is also  
16 known as the weighted cost of capital.

17  
18 Technically, the fair rate of return is a legal and accounting concept which refers to an ex  
19 post (after the fact) earned return on an asset base, while the cost of capital is an  
20 economic and financial concept which refers to an ex ante (before the fact) expected or  
21 required return on a liability base. However, in regulatory proceedings, the two terms are  
22 often used interchangeably and are done so in my testimony.

23  
24 From an economic standpoint, a fair rate of return is normally interpreted to incorporate  
25 the financial concepts of financial integrity, capital attraction, and comparable returns for  
26 similar risk investments. These concepts are derived from economic and financial theory  
27 and are generally implemented using financial models and economic concepts such as  
28 discounted cash flow (DCF), capital asset pricing model (CAPM), and comparable  
29 earnings (CE).

1 From a legal standpoint, two U.S. Supreme Court decisions are universally cited as  
2 providing the legal standards for a fair rate of return. The first is Bluefield Water Works  
3 and Improvement Company v. Public Service Commission of the State of West Virginia,  
4 262 U.S. 679 (1923). In this decision, the Court stated:

5  
6 What annual rate will constitute **just compensation** depends upon many  
7 circumstances and must be **determined by the exercise of a fair and**  
8 **enlightened judgment**, having regard to all relevant facts. A **public**  
9 **utility** is entitled to such rates as will permit it to **earn a return** on the  
10 value of the property which it employs for the convenience of the public  
11 equal to that **generally being made** at the same time and in the same  
12 general part of the country on **investments in other business**  
13 **undertakings** which are **attended by corresponding risks and**  
14 **uncertainties**; but it has **no constitutional right to profits** such as are  
15 realized or anticipated in **highly profitable enterprises** or **speculative**  
16 **ventures**. The **return** should be reasonably sufficient to assure  
17 confidence in the **financial soundness** of the utility, and should be  
18 adequate, under efficient and economical management, to maintain and  
19 **support its credit** and **enable it to raise the money** necessary for the  
20 proper discharge of its public duties. A rate of return may be reasonable at  
21 one time, and become too high or too low by changes affecting  
22 opportunities for investment, the money market, and business conditions  
23 generally. [Emphasis added]

24  
25 This decision established the following standards for a fair rate of return: comparable  
26 earnings, financial integrity, and capital attraction. It also noted the changing level of  
27 required returns over time.

28  
29 The second decision is Federal Power Commission v. Hope Natural Gas Company, 320  
30 U.S. 591 (1942). In that decision, the court stated:

31  
32 The rate-making process under the (Natural Gas) Act, i.e., the fixing of  
33 'just and reasonable' rates, involves a **balancing** of the **investor** and  
34 **consumer interests** . . . From the investor or company point of view it is  
35 important that there be enough revenue not only for operating expenses  
36 but also for the capital costs of the business. These include service on the



1 debt and dividends on the stock. By that standard the **return** to the **equity**  
2 **owner** should be **commensurate** with **returns** on **investments** in **other**  
3 **enterprises having corresponding risks**. That return, moreover, should  
4 be sufficient to assure confidence in the **financial integrity** of the  
5 enterprise, so as to **maintain its credit** and to **attract capital**. [Emphasis  
6 added]  
7

8 This case affirmed the primary standards of the Bluefield case, as well as the public  
9 interest standard. The Hope case is also credited with the establishment of the "end  
10 result" doctrine, which maintains that the methods utilized to develop a fair return are not  
11 important as long as the end result is reasonable.  
12

13 I believe the Bluefield and Hope decisions, as well as subsequent cases which cite these  
14 decisions, have identified three economic and financial parameters relevant to the  
15 determination of a fair rate of return:  
16

- 17 1. comparable earnings
- 18 2. financial integrity and
- 19 3. capital attraction.  
20

21 It is apparent that these legal standards reflect the economic criteria encompassed in the  
22 "opportunity cost" principle of economics, which holds that a utility and its investors  
23 should be afforded an opportunity (not a guarantee) to earn a return commensurate with  
24 returns they could expect to achieve on investments of similar risk. The opportunity cost  
25 principle is consistent with the fundamental premise on which regulation rests, namely  
26 that it is intended to act as a surrogate for competition.  
27

28 **Q. HOW CAN THESE STANDARDS BE EMPLOYED TO ESTIMATE THE COST**  
29 **OF CAPITAL FOR A UTILITY?**

30 A. Neither the courts nor economic/financial theory have developed exact and mechanical  
31 procedures for precisely determining the cost of capital. This is the case since the cost of

1 capital is an opportunity cost and is prospective looking, which indicates it must be  
2 estimated.

3  
4 There are several useful models which can be employed to assist in estimating the cost of  
5 equity capital, which is the capital structure item that is the most difficult to determine.  
6 These include the discounted cash flow method (DCF), the capital asset pricing model  
7 (CAPM), the comparable earnings analysis (CE) and the risk premium (RP) method.  
8 Each of these methods (or models) differs from the others and each, if properly  
9 employed, can be a useful tool in estimating the cost of common equity for a regulated  
10 utility.

11  
12 The CE method, for example, is oriented toward the "fairness" standard, whereas the  
13 CAPM, DCF and RP methods are oriented toward the "capital attraction" standard. The  
14 CE method measures returns on book equity or "vintage" capital, while the other methods  
15 measure the return required per dollar of current purchasing power.

16  
17 Among the capital attraction models, the DCF method estimates a company's cost of  
18 equity directly (by utilizing expected cash flows and current market prices), while the  
19 CAPM and RP methods estimate the cost of equity indirectly (by evaluating the relative  
20 risk and expected returns of alternative investments).

21  
22 In performing analyses of the cost of common equity, it is customary and appropriate to  
23 consider the results of several alternative methods. The analyst and/or Commission must  
24 then decide upon the appropriate weight to give the results of each method in the  
25 determination of the cost of common equity. This follows since each method requires  
26 judgment as to the reasonableness of its assumptions and inputs; each model has its own  
27 way of examining investor behavior; each model proceeds from different fundamental  
28 premises, most of which cannot be validated empirically; and each model may not at all  
29 times be representative of current investor behavior. Just as there is no uniformity as to

1        which method is used by investors, there should not be a single method exclusively used  
2        to estimate a utility's cost of common equity. At the very least, alternative methods  
3        should be used as a check on a primary or preferred method.  
4

5        **Q.    WHICH METHODS HAVE YOU EMPLOYED IN YOUR ANALYSES OF THE**  
6        **COST OF COMMON EQUITY?**

7        A.    I have utilized three methodologies in my testimony. These are DCF, CAPM and CE.

1 **IV. GENERAL ECONOMIC CONDITIONS**

2  
3 **Q. WHAT IS THE IMPORTANCE OF ECONOMIC AND FINANCIAL**  
4 **CONDITIONS IN DETERMINING THE COST OF CAPITAL?**

5 A. The costs of capital, for both fixed-cost (debt and preferred stock) components and  
6 common equity, are determined in part by economic and financial conditions. At any  
7 given time, each of the following factors has direct and significant influences on the costs  
8 of capital: the level of economic activity, the stage of the business cycle, the level of  
9 inflation, and expected economic conditions. I note that this position is consistent with  
10 the Supreme Court's Bluefield decision which noted that "[a] rate of return may be  
11 reasonable at one time, and become too high or too low by changes affecting  
12 opportunities for investment, the money market, and business conditions generally."

13  
14 **Q. WHAT INDICATORS OF ECONOMIC AND FINANCIAL ACTIVITY HAVE**  
15 **YOU EVALUATED IN YOUR ANALYSES?**

16 A. I have examined several sets of economic statistics for the period 1975 to the present. I  
17 chose this period since it permits the evaluation of economic conditions over three full  
18 business cycles, and thus makes it possible to assess changes in long-term trends. A  
19 business cycle is commonly defined as a complete period of expansion (recovery and  
20 growth) and contraction (recession). A full business cycle is a useful and convenient  
21 period over which to measure levels and trends in long-term capital costs because it  
22 incorporates the cyclical (i.e., stage of the business cycle) influences and thus permits a  
23 comparison of structural (or long-term) trends.

24  
25 **Q. PLEASE DESCRIBE THE MOST RECENT BUSINESS CYCLE AND THE**  
26 **PRIOR TWO HISTORIC CYCLES.**

27 A. The most recent cycle began in April of 1991 and ended in the fourth quarter of 2001,  
28 making it over 10½ years old. On a shorter-term basis, the economy slowed considerably  
29 in late 2000 and early 2001 and was in a recession during the final three quarters of 2001,

1 notwithstanding the Federal Reserve lowering interest rates eleven times in 2001 in an  
2 aggressive effort to create a “soft landing” and avoid a recession. The events of  
3 September 11, 2001 further damaged the U.S. economy.

4  
5 The two prior complete cycles covered the following periods:

<u>Business Cycle</u>	<u>Expansion Period</u>	<u>Contraction Period</u>
1975-1982	Mar. 1975-July 1981*	Aug. 1981-Oct. 1982
1983-1991	Nov. 1982-July 1990	Aug. 1990-Mar. 1991
1991-2001	Apr. 1991- March. 2001	April-2001-Dec. 2001

6  
7  
8  
9  
10 \* There was a brief "mini-recession" in 1980

11 The expansion phase of the past cycle surpassed the average length of expansions in the  
12 post-World War II era (i.e., about five years). The 1982-1990 expansion (seven years,  
13 eight months) was the previous longest peacetime expansion of this era.

14  
15 **Q. PLEASE DESCRIBE RECENT ECONOMIC AND FINANCIAL CONDITIONS**  
16 **AND THEIR IMPACT ON THE COSTS OF CAPITAL.**

17 A. Schedule 2 shows several sets of economic data. Page 1 contains general macro-  
18 economic statistics while pages 2 and 3 contain financial market statistics. Page 1 of  
19 Schedule 2 shows that, following the expansion of 1991-early 2001, the economy  
20 endured a relatively mild recession during the final three quarters of 2001. This is  
21 indicated by the growth in real (i.e., adjusted for inflation) Gross Domestic Product,  
22 industrial production, and the unemployment rate. This decline in economic growth was  
23 magnified by the events of and subsequent to September 11, 2001.

24  
25 During the first three quarters of 2002, economic growth was positive, but slow.  
26 Currently (fourth quarter of 2002), there is concern that the economy will again decline in  
27 what is described as a “double dip” recession.

1 The rate of inflation is also shown on page 1 of Schedule 2. As indicated, the Consumer  
2 Price Index (CPI) rose significantly during the 1975-1982 business cycle and reached  
3 double digit levels in 1979-1980. The rate of inflation declined substantially in 1981 and  
4 remained at or below 6.1 percent during the 1983-1991 business cycle, as the CPI  
5 generally grew by about four percent annually from 1982-1989 (each year except one  
6 from 1982-1989 had a CPI rate between 3.8% and 4.6%). Since 1991, the CPI has been  
7 3.4 percent or lower. The 1.6 percent rate of inflation rate in 2001 was among the lowest  
8 levels over the past 26 years.

9  
10 **Q. WHAT HAVE BEEN THE TRENDS IN INTEREST RATES?**

11 A. Page 2 of Schedule 2 shows several series of interest rates. Rates rose sharply in 1975-  
12 1981 when the inflation rate was high and rising. Rates then fell substantially throughout  
13 the remainder of the 1980's and into the 1990's. During the recent business cycle, long-  
14 term rates remained relatively stable, in comparison to the prior cycles, and currently are  
15 lower than at any time during the prior three cycles. Over the past several months, both  
16 long-term and short-term interest rates have declined. As noted previously, the Federal  
17 Reserve lowered short-term interest rates eleven times last year in an effort to stimulate  
18 the economy.

19  
20 **Q. WHAT HAVE BEEN THE TRENDS IN COMMON SHARE PRICES?**

21 A. Page 3 of Schedule 2 shows several series of common stock prices and ratios. These  
22 generally indicate that share prices were basically stagnant during the high  
23 inflation/interest rate environment of the late 1970's and early 1980's. On the other hand,  
24 the 1983-1991 and the 1991-2001 cycles witnessed a significant upward trend in stock  
25 prices. Over the past two years, however, stock prices have been volatile and have  
26 declined substantially from their highs reached in 1999 and early 2000. Immediately  
27 after September 11, stock prices dropped significantly, then rebounded somewhat.  
28 Recent months has seen extremely volatile stock price levels, stemming largely from

1 concerns about the strength of the economy and about the accuracy of reported corporate  
2 profits.

1 **V. SCE&G'S OPERATIONS AND RISKS**

2  
3 **Q. PLEASE SUMMARIZE SCE&G AND ITS OPERATIONS.**

4 A. SCE&G is a regulated public utility engaged in the generation, transmission,  
5 distribution and sale of electricity and the purchase and sale of natural gas in South  
6 Carolina.

7  
8 **Q. PLEASE DESCRIBE SCANA.**

9 A. SCANA is a holding company that owns SCE&G, South Carolina Pipeline Corporation  
10 (SCPC), Public Service Company of North Carolina (PSNC-acquired in early 2000), and  
11 a number of other unregulated subsidiaries.

12  
13 **Q. WHAT HAS BEEN THE TREND IN SCANA'S BUSINESS SEGMENT RATIOS**  
14 **IN RECENT YEARS?**

15 A. This is shown on Schedule 3. As indicated, the electric utility activities of SCANA have  
16 accounted for the following percentages:

17

	<u>Operating</u>	<u>Operating</u>	<u>Capital</u>	<u>Identifiable</u>
	<u>Revenues</u>	<u>Income</u>	<u>Expenditures</u>	<u>Assets</u>
18 1997	58%	88%	65%	78%
19 1998	56%	90%	69%	76%
20 1999	58%	90%	85%	73%
21 2000	41%	80%	69%	63%
22 2001	45%	79%	76%	61%

23  
24 Source: SCANA Annual Report.

25  
26  
27 The above table shows that SCANA's electric utility operations account for about half of  
28 operating revenue, but the majority (i.e., 60% or greater) of income, capital expenditures  
29 and assets. It is also apparent that the electric utility operations of SCANA are the most  
30 profitable segment, as the percentages of operating income exceed those of operating  
31 revenues, capital expenditures and assets.



1 **Q. WHAT ARE THE CURRENT BOND RATINGS OF SCE&G?**

2 A. The present bond ratings of SCE&G are as follows:

3 Moody's A1

4 Standard & Poor's A-

5  
6 **Q. WHAT HAVE BEEN THE TRENDS IN SCE&G'S AND SCANA'S BOND RATINGS?**

7  
8 A. This is shown on Schedule 4, which indicates two points. First, SCE&G has maintained  
9 higher ratings than SCANA. Second, the ratings of both companies have remained  
10 relatively stable over the past 10 years.

11  
12 **Q. ARE THERE ANY DIRECT INDICATIONS OF THE LOWER RISKS OF SCE&G'S OPERATIONS, RELATIVE TO THOSE OF SCANA'S NON-REGULATED OPERATIONS?**

13  
14  
15 A. Yes. SCE&G has higher Moody's bond ratings than SCANA, as shown below:

16

	<u>Moody's</u>	<u>S&amp;P</u>
18 SCE&G	A1	A-
19 PSNC	A2	A-
20 SCANA	A3	A-

21

22 As noted below, the ratings of S&P reflect the total operations of SCANA for  
23 each of its subsidiaries and operations.

24  
25 **Q. ARE THE RATINGS OF SCE&G INDEPENDENT OF THE OTHER ACTIVITIES OF SCANA?**

26  
27 A. No, they are not. Standard & Poor's, for example, presented the following analyses of  
28 SCE&G and SCANA in its July 31, 2002 report:

1 On July 31, 2002, Standard & Poor's Ratings Services lowered its ratings  
2 on SCANA Corp. and its affiliates South Carolina Electric and Gas Co.  
3 (SCE&G) and Public Service Co. of North Carolina Inc. (PSNC) to "A-"  
4 from "A."

5  
6 The **rating actions reflect the parent company's current high leverage**  
7 and the fact that management's previous plan to strengthen its balance  
8 sheet to 50% total debt to capital is being prolonged by the company's  
9 need to carry out increased capital spending during 2002 to 2004 and the  
10 delay in its ability to monetize all of its Deutsche Telekom shares  
11 (currently at a lower price than expected). These factors greatly hinder the  
12 company's ability to have its key financial ratios return to former levels of  
13 credit quality that support an "A" ratings profile.

14  
15 The **ratings for SCANA and its affiliates, SCE&G and Public Service**  
16 **Co. of North Carolina Inc. (PSNC) reflect a consolidated rating**  
17 **methodology**, resulting in the same corporate credit rating (risk of default)  
18 for all three entities. Standard & Poor's has determined that the operations  
19 and flow of funds throughout the corporation are not constrained by North  
20 Carolina or South Carolina regulators.

21  
22 The ratings for SCANA are derived mainly from the credit quality of  
23 SCE&G, SCANA's largest subsidiary, which generates most of the  
24 consolidated company's net income and cash flow (90% and 80%,  
25 respectively, for 2001) and accounted for 66% of total assets at year-end  
26 2001. The **ratings for SCANA reflect stable cash flow from regulated**  
27 **electric and gas businesses, constructive regulatory environments, and**  
28 **competitive business positions.** SCE&G and PSNC serve economically  
29 healthy areas of the U.S., and have above-average fundamental business  
30 profiles characterized by efficient operations, low costs, and relatively  
31 favorable rate structures.

32  
33 The **ratings for SCANA and its affiliates also reflect the expectation that**  
34 **relatively low risk, regulated energy-related businesses** will account for  
35 over 90% of the consolidated company's assets and capital budget for the  
36 foreseeable future. **SCANA also owns the interstate natural gas**  
37 **pipeline** that serves SCE&G and has interests in electric and natural gas  
38 marketing and telecommunications.

39  
40 The **credit profile of the consolidated company has been stressed by the**  
41 **approximately \$700 million in financing incurred to acquire PSNC in**  
42 **February 2000 and is expected to remain somewhat stressed for the**  
43 **next few years.** During 2002, and for the next couple of years, the

1 consolidated company will carry relatively high leverage, with debt as a  
2 percentage of total capitalization exceeding 50%, and relatively weak cash  
3 flow, with funds from operations (FFO) interest coverage of less than 4  
4 times (x). Over time, Standard & Poor's expects the company to improve  
5 its financial profile and operate around the 50% total debt-to-total capital  
6 ratios and FFO interest coverage of around 4.0x. These key financial  
7 ratios are more supportive of the current "A-" rating category. [Emphasis  
8 added]  
9

10 These statements by Standard & Poor's indicate its recognition that the  
11 operations of SCE&G are less risky than the other, non-regulated operations of  
12 SCANA. In addition, it indicates that SCANA's acquisition of PSNC stressed the  
13 financial and credit profile of the Company. It appears, further, that the recent  
14 downgrade of SCE&G's bonds was the result of the PSNC acquisition.  
15

16 **Q. HOW DO THE RISKS OF SCE&G COMPARE TO OTHER ELECTRIC**  
17 **UTILITIES?**

18 A. The risks of SCE&G, as measured by its bond ratings, are similar to the group of  
19 comparison companies I describe in a subsequent section of my testimony. In addition,  
20 the S&P "business position", a measure of business risk, is similar to the comparison  
21 group.

1 **VI. CAPITAL STRUCTURE AND COSTS OF DEBT AND PREFERRED STOCK**

2  
3 **Q. WHAT IS THE IMPORTANCE OF DETERMINING A PROPER CAPITAL**  
4 **STRUCTURE IN A REGULATORY FRAMEWORK?**

5 A. A utility's capital structure is important since the concept of rate base - rate of return  
6 regulation requires that a utility's capital structure be determined and utilized in  
7 estimating the total cost of capital. Within this framework, it is proper to ascertain  
8 whether the utility's capital structure is appropriate relative to its level of business risk  
9 and relative to other utilities.

10  
11 As discussed in Section III of my testimony, the purpose of determining the proper  
12 capital structure for a utility is to help ascertain the capital costs of the company. The  
13 rate base - rate of return concept recognizes the assets which are employed in providing  
14 utility services and provides for a return on these assets by identifying the liabilities and  
15 common equity (and their cost rates) which are used to finance the assets. In this process,  
16 the rate base is derived from the asset side of the balance sheet and the cost of capital is  
17 derived from the liabilities/owners' equity side of the balance sheet. The inherent  
18 assumption in this procedure is that the dollar values of the capital structure and the rate  
19 base are approximately equal and the former is utilized to finance the latter.

20  
21 The common equity ratio (i.e., the percentage of common equity in the capital structure)  
22 is the capital structure item which normally receives the most attention. This is the case  
23 since common equity: (1) usually commands the highest cost rate; (2) generates  
24 associated income tax liabilities; and (3) causes the most controversy since its cost cannot  
25 be precisely determined.

1 **Q. HOW IS SCE&G FINANCED?**

2 A. SCE&G's common stock is owned by SCANA. As a result, SCE&G obtains all of its  
3 equity funding from SCANA. SCE&G obtains its debt and preferred financing on its  
4 own behalf.  
5

6 **Q. HOW HAVE YOU EVALUATED THE CAPITAL STRUCTURE OF SCE&G?**

7 A. I have examined the five year historic (1997-2001) capital structure ratios of SCE&G and  
8 SCANA. These are shown on Schedule 5.  
9

10 I have summarized below the common equity ratios for SCE&G and SCANA for the last  
11 five years:

	<u>SCE&amp;G</u>		<u>SCANA</u>	
	<u>Inc'l S-T Debt</u>	<u>Exc'l S-T Debt</u>	<u>Inc'l S-T Debt</u>	<u>Exc'l S-T Debt</u>
1997	49.8%	50.0%	48.9%	49.7%
1998	49.9%	52.0%	45.5%	47.9%
1999	50.1%	52.6%	47.7%	50.8%
2000	50.2%	53.2%	37.0%	39.9%
2001	49.7%	52.2%	37.1%	38.2%
June 30, 2002	46.8%	49.6%	36.3%	37.7%

22 The decline in SCANA's 2000 common equity ratio was, according to the Company's  
23 Annual Report, the result of the acquisition of PSNC.  
24

25 **Q. HOW DO THESE CAPITAL STRUCTURE RATIOS COMPARE TO THE**  
26 **ELECTRIC UTILITY INDUSTRY?**

27 A. I have prepared Schedule 6 to make this comparison. This schedule shows 1996-2000  
28 (i.e., most recent five-year period available) capital structure ratios of Moody's electric

utility group. Schedule 6 indicates that the Moody's group has the following common equity ratios:

	<u>Including S-T Debt</u>	<u>Excluding S-T Debt</u>
1996	45.8%	47.3%
1997	44.9%	46.5%
1998	42.7%	45.5%
1999	39.3%	43.8%
2000	32.4%	36.2%

These common equity ratios are generally lower than those of SCE&G. This indicates the SCE&G has below-average financial risk, relative to the electric utility industry.

**Q. WHAT CAPITAL STRUCTURE RATIO HAS SCE&G REQUESTED IN THIS PROCEEDING?**

A. The Company requests use of the following capital structure:

<u>Capital Item</u>	<u>Percentage</u>
Long-term Debt	43.96%
Preferred Stock	4.48%
Common Equity	51.56%

According to the Company's application these are the "as adjusted" March 31, 2002 capital structure ratios of SCE&G adjusted for the effects of issuing \$150 million of common stock.

**Q. WHAT CAPITAL STRUCTURE DO YOU PROPOSE TO USE IN THIS PROCEEDING?**

A. I have modified the adjusted test period capital structure of SCE&G to include short-term debt. I used for this purpose the actual level of short-term debt as of March

1 31, 2002. As my Schedule 5 indicates, SCE&G has consistently utilized short-term debt  
2 during recent years. I believe it appropriate to include short-term debt in the capital  
3 structure when a utility consistently employs this type of capital. I would note that rating  
4 agencies such as Standard & Poor's include short-term debt in their benchmark ratios.  
5

6 **Q. IS IT APPARENT THAT SCE&G USES SHORT-TERM DEBT TO FINANCE A**  
7 **PORTION OF ITS RATE BASE?**

8 A. Yes, it is. The company's rate base, for example, includes construction work in progress  
9 (CWIP). The allowance for funds used during construction (AFUDC) rate for SCE&G  
10 includes a short-term debt component, as is indicated in the Company's FERC Form 1.  
11 In addition, the Company's rate base includes nuclear and fossil fuel inventories, as well  
12 as sulfur dioxide emission allowances, all of which are financed by the issuance of short-  
13 term debt, as indicated in the Company's Form 10-K. It is clear that, since these items  
14 are financed, in part or in whole, by short-term debt, a proper matching of rate base and  
15 capitalization requires the inclusion of short-term debt in capital structure.  
16

17 **Q. WHAT ARE THE COSTS OF LONG-TERM DEBT, PREFERRED STOCK, AND**  
18 **SHORT TERM DEBT?**

19 A. The Company's filing cites a long-term debt cost of 7.23 percent and a preferred stock  
20 cost rate of 6.80 percent. I use these cost rates in my cost of capital analyses. For the  
21 cost of short-term debt, I use the current actual SCE&G cost of 1.81 percent, as reflected  
22 in the response to Question No. 5-8 of the Interrogatories of the Consumer Advocate.  
23

24 **Q. CAN THE COST OF COMMON EQUITY BE DETERMINED WITH THE SAME**  
25 **DEGREE OF PRECISION AS THE COSTS OF DEBT AND PREFERRED**  
26 **STOCK?**

27 A. No. The cost rates of debt are largely determined by interest payments, issue prices, and  
28 related expenses. Even though alternative methodologies exist for determining the

1        embedded cost rate, the cost rate for debt is generally agreed to, at least within a  
2        relatively small range.

3  
4        The cost of common equity, on the other hand, is not susceptible of specific  
5        measurement, primarily because this cost is an opportunity cost. There are, however,  
6        several models that can be employed to estimate the cost of common equity. Three of the  
7        primary methods - DCF, CAPM, and CE - are developed in the following sections of my  
8        testimony.



1 **VII. SELECTION OF COMPARISON GROUPS**

2  
3 **Q. HOW HAVE YOU ESTIMATED THE COST OF COMMON EQUITY FOR**  
4 **SCE&G?**

5 A. SCE&G is not a publicly traded company; rather, it is a subsidiary of SCANA. As a  
6 result, it is not possible to conduct direct analyses of the cost of common equity for  
7 SCE&G. It is possible to conduct studies of SCANA's cost of equity; however, the  
8 diversified nature of this company's operations indicate this is not an adequate proxy for  
9 the cost of equity for SCE&G. As a result, it is useful to also analyze groups of  
10 comparison or "proxy" companies as a substitute for SCE&G to determine its cost of  
11 common equity.

12  
13 The most frequently used alternative is to select a group of comparison electric utilities. I  
14 have examined two such groups for comparison to SCE&G. I have selected one group  
15 using the criteria listed on Schedule 7. These criteria are as follows:

- 16 (1) Market cap of \$1 billion to \$5 billion;  
17 (2) Electric revenues 40% or greater;  
18 (3) Common equity ratio 35% or greater;  
19 (4) Value Line Safety of 1 or 2;  
20 (5) S&P and Moody's bond ratings of A

21  
22 I have further conducted studies of the cost of equity for the group of "comparable  
23 utilities" selected by SCE&G's witness Burton G. Malkiel, which were developed in the  
24 testimony of Thomas R. Osborne.

25  
26 I note that the criteria I utilized to select my group of comparison companies, as outlined  
27 in Schedule 7, are designed to select a group of companies with similar operating,  
28 financial, and risk characteristics to SCE&G. As such, these companies represent a  
29 suitable proxy for determining the cost of equity for SCE&G.

1   **Q.   DO YOU BELIEVE THE SELECTION OF COMPARISON COMPANIES IN**  
2       **THIS PROCEEDING IS A PRIMARY SOURCE OF THE DIFFERENCE IN**  
3       **COST OF EQUITY RECOMMENDATIONS BETWEEN YOURSELF AND DR.**  
4       **MALKIEL?**

5   **A.**   No. It is apparent from my analyses that the cost of capital for each of these groups is  
6       approximately the same. As a result, the actual groups of companies selected for  
7       comparison purposes should not be construed as a primary source of disagreement  
8       between my recommendation and those of SCE&G witness Malkiel.

## VIII. DISCOUNTED CASH FLOW ANALYSIS

### Q. WHAT IS THE THEORY AND METHODOLOGICAL BASIS OF THE DISCOUNTED CASH FLOW MODEL?

A. The discounted cash flow (DCF) model is one of the oldest, as well as the most commonly-used, models for estimating the cost of common equity for public utilities. The DCF model is based on the "dividend discount model" of financial theory, which maintains that the value (price) of any security or commodity is the discounted present value of all future cash flows. When applied to common stocks, the dividend discount model describes the value of a stock as follows:

$$P = \frac{D_1}{(1 + K_1)} + \frac{D_2}{(1 + K_2)^2} + \dots + \frac{D_n}{(1 + K_n)^n} = \sum_{i=1}^n \frac{D}{(1 + K)^n}$$

where: P = current price

$D_1$  = dividends paid in period 1, etc.

$K_1$  = discount rate in period 1, etc.

n = infinity

This relationship can be simplified if dividends are assumed to grow at a constant rate of g. This variant of the dividend discount model is known as the constant growth or Gordon DCF model. In this framework, the price of a stock is determined as follows:

$$P = \frac{D}{(K - g)}$$

where: P = current price

D = current dividend rate

K = discount rate (cost of capital)

g = constant rate of expected growth

This equation can be solved for K (i.e., the cost of capital) to yield the following formula:

$$K = \frac{D}{P} + g$$

This formula essentially states that the return expected or required by investors is comprised of two factors: the yield (current income) and expected growth (future income).

**Q. PLEASE EXPLAIN HOW YOU HAVE EMPLOYED THE DCF MODEL.**

A. I have utilized the constant growth DCF model. In doing so, I have combined the current dividend yield for each group of electric stocks described in the previous section with several indicators of expected growth.

**Q. HOW DID YOU DERIVE THE DIVIDEND YIELD COMPONENT OF THE DCF EQUATION?**

A. There are several methods which can be used for calculating the yield component. These methods generally differ in the manner in which the dividend rate is employed, i.e., current versus future dividends or annual versus quarterly compounding of dividends. I believe the most appropriate yield component is a quarterly compounding variant which is expressed as follows:

$$Yield = \frac{D_0(1 + 0.5g)}{P_0}$$

This yield component recognizes the timing of dividend payments and dividend increases.

The  $P_0$  in my yield calculation is the average (of high and low) stock price for each company for the most recent three month period (July-September, 2002). The  $D_0$  is the current annualized dividend rate for each company.

1 **Q. HOW HAVE YOU ESTIMATED THE GROWTH COMPONENT OF THE DCF**  
2 **EQUATION?**

3 A. The growth rate component of the DCF model is usually the most crucial and  
4 controversial element involved in using this methodology. The objective of estimating  
5 the growth component is to reflect the growth expected by investors which is embodied  
6 in the price (and yield) of a company's stock. As such, it is important to recognize that  
7 individual investors have different expectations and consider alternative indicators in  
8 deriving their expectations. A wide array of techniques exist for estimating the growth  
9 expectations of investors. As a result, it is evident that no single indicator of growth is  
10 always used by all investors. It therefore is necessary to consider alternative indicators of  
11 growth in deriving the growth component of the DCF model.

12 I have considered five indicators of growth in my DCF analyses. These are:

- 13 1. 1997-2001 (5 year average) earnings retention, or fundamental growth;
- 14 2. 5 year average of historic growth in earnings per share (EPS), dividends  
15 per share (DPS), and book value per share (BVPS);
- 16 3. 2002-2007 projections of earnings retention growth;
- 17 4. 2000-2006 projections of EPS, DPS, and BVPS; and
- 18 5. 5 year projections of EPS growth as reported in First Call (formerly  
19 I/B/E/S).

20  
21 I believe this combination of growth indicators is a representative and appropriate set  
22 with which to estimate investor expectations of growth for the groups of electric  
23 companies.

24  
25 **Q. PLEASE DESCRIBE YOUR DCF CALCULATIONS.**

26 A. Schedule 8 presents my DCF analysis. Page 1 shows the calculation of the "raw" (i.e.,  
27 prior to adjustment for growth) dividend yield. Pages 2-3 show the growth rate for the  
28 groups of comparison electric companies. Page 4 shows the DCF calculations, which are

presented on several bases: average, median, mid-point of individual growth rates/DCF costs, and range of low/high values. These results can be summarized as follows:

	<u>Mid-Point</u>	<u>Average</u>	<u>Median</u>	<u>Range</u>
Comparison Group	10.5 %	10.6%	10.8%	9.4-11.5%
Osborne Comparable Group	11.0%	10.6%	10.5%	9.4-12.5%
SCANA	8.3%	8.7%	--	6.0-10.5%

**Q. WHAT DO YOU CONCLUDE FROM YOUR DCF ANALYSES?**

A. Based upon my analyses, I believe a range of 10½ percent to 11 percent represents the current DCF cost of equity for SCE&G. The lower end of this range reflects the mid-point, average, and median of the DCF results for the groups of comparison companies while the upper end of the range reflects the upper portion of the DCF calculations for the groups examined. I have focused on the upper portion of the DCF calculations since current financial conditions (low interest rates and high market-to-book ratios for utilities) have the effect of driving DCF results to low levels by historic standards. I do not, however, focus exclusively on the high end results since this would place total reliance on a single growth rate, which is improper.

Since investors utilize more than one source of growth in making investment decisions, a DCF analysis should not exclusively focus on a single growth rate. As I describe elsewhere in my testimony, this is the major difference between my DCF analysis and the DCF analyses of SCE&G witness Malkiel.

1        **IX.    CAPITAL ASSET PRICING MODEL ANALYSIS**

2  
3    **Q.    PLEASE DESCRIBE THE THEORY AND METHODOLOGICAL BASIS OF**  
4    **THE CAPITAL ASSET PRICING MODEL.**

5    A.    The Capital Asset Pricing Model (CAPM) is a version of the risk premium method. The  
6        CAPM describes and measures the relationship between a security's investment risk and  
7        its market rate of return. The CAPM was developed in the 1960s and 1970s as an  
8        extension of modern portfolio theory (MPT), which studies the relationships among risk,  
9        diversification, and expected returns.

10  
11   **Q.    HOW IS THE CAPM DERIVED?**

12   A.    The general form of the CAPM is:

$$K = R_f + b (R_m - R_f)$$

13  
14        where: K = cost of equity

15                 $R_f$  = risk free rate

16                 $R_m$  = return on market

17                 $\beta$  = beta

18                 $R_m - R_f$  = market risk premium

19        As noted previously, the CAPM is a variant of the risk premium method. I believe the  
20        CAPM is generally superior to the simple risk premium method because the CAPM  
21        specifically recognizes the risk of a particular company or industry, whereas the simple  
22        risk premium method does not.

23  
24   **Q.    WHAT GROUPS OF COMPANIES HAVE YOU UTILIZED TO PERFORM**  
25   **YOUR CAPM ANALYSES?**

26   A.    I have performed CAPM analyses for the same groups of electric utilities evaluated in my  
27        DCF analyses.

**Q. WHAT RATE DID YOU USE FOR THE RISK-FREE RATE?**

A. The first term of the CAPM is the risk free rate ( $R_f$ ). The risk-free rate reflects the level of return that can be achieved without accepting any risk.

In reality, there is no such thing as a truly riskless asset. In CAPM applications, the risk-free rate is generally recognized by use of U.S. Treasury securities. This follows since Treasury securities are default-free owing to the government's ability to print money and/or raise taxes to pay its debts.

Two types of Treasury securities are often utilized as the  $R_f$  component - short-term U.S. Treasury bills and long-term U.S. Treasury bonds. I have performed CAPM calculations using the three-month average yield (July-September, 2002) for 25 year U.S. Treasury bonds. Over this three-month period, these bonds had an average yield of 5.22 percent.

**Q. WHAT BETAS DID YOU EMPLOY IN YOUR CAPM?**

A. I utilized the most current Value Line betas for each company in the groups of comparison electric companies. These are shown on Schedule 10 and are seen to be within a range of 0.50 to 0.75 (the beta for the entire market is 1.00).

**Q. HOW DID YOU ESTIMATE THE MARKET RETURN COMPONENT?**

A. The market return component ( $R_m$ ) represents the expected return from holding the entire market portfolio. In the CAPM, this term technically reflects the return from holding the weighted combination of all assets (i.e., stocks, bonds, real estate, collectibles, etc.). However, the traditional use of CAPM in utility rate proceedings focuses on  $R_m$  as the return on common stocks.

Alternative methods have been prepared with which to estimate  $R_m$ . As was the case in the DCF analysis concerning investors' expectations of growth, investors do not universally share the same expectations of the return on the overall market. My analysis



1 of the  $R_m$  focuses on various returns for two Standard & Poor's groups which are well-  
2 recognized indices of the overall stock market. Two measures of return for the S&P  
3 groups have been performed.

4  
5 Schedule 9 shows the return on equity for the S&P 400 Industrials for the period 1949-  
6 2000 (all available years reported by S&P). I examined the S&P 400 since the S&P 400  
7 Industrials goes back to 1949 whereas the S&P 500 only goes back to 1978. The average  
8 return on equity for the S&P 400 Industrials over the 1949-2000 period is 14.86 percent.  
9 Based upon these returns, I conclude that the expected return on equity is about 14.86  
10 percent for the S&P 400 group.

11  
12 I have also considered the total return for the S&P 500 group, as tabulated by Ibbotson  
13 Associates, using both arithmetic and geometric means. I have considered the total  
14 returns for the entire 1926-2001 period, which are as follows:

15	Arithmetic	12.7%
16	Geometric	10.7%

17  
18 I conclude from this that the expected total return for the S&P 500 group is about 11¾  
19 percent.

20  
21 I combine the results of the return on common equity (14.86 percent) and the total return  
22 (11¾ percent) and conclude that 13.25 percent is the expected  $R_m$ .

23  
24 **Q. PLEASE DESCRIBE THE RESULTS OF YOUR CAPM ANALYSIS.**

25 A. Schedule 10 shows my CAPM results. The results are as follows:

26		<u>Mean</u>	<u>Median</u>
27	Comparison Group	9.9%	10.0%
28	Osborne Comparable Group	10.3%	10.4%
29	SCANA	9.6%	--

1   **Q.   WHAT IS YOUR CONCLUSION CONCERNING THE CAPM COST OF**  
2   **EQUITY FOR THE GROUPS OF COMPARISON COMPANIES?**

3   A.   The CAPM results collectively indicate a cost of about 10 percent to 10½ percent for the  
4   two groups of comparison companies.

1   **X.     COMPARABLE EARNINGS ANALYSIS**

2  
3   **Q.     PLEASE DESCRIBE THE BASIS OF THE CE METHODOLOGY.**

4   A.    The CE method is derived from the "corresponding risk" standard of the Bluefield and  
5       Hope cases. This method is based upon the economic concept of opportunity cost. As  
6       previously noted, the cost of capital is an opportunity cost: the prospective return  
7       available to investors from alternative investments of similar risk. If, in the opinion of  
8       those who save and commit capital, the prospective return from a given investment is not  
9       equal to that available from other investments of similar risk, the available capital will  
10      tend to be shifted to the alternative investments. Through this mechanism, opportunity-  
11      cost-driven pricing signals direct capital to its most productive uses; thus, a free  
12      enterprise system promotes an efficient allocation of scarce resources.

13  
14      The CE method is designed to measure the returns expected to be earned on the original  
15      cost book value of similar risk enterprises. Thus, this method provides a direct measure  
16      of the fair return, since it translates into practice the competitive principle upon which  
17      regulation rests.

18  
19      The CE method normally examines the experienced and/or projected returns on book  
20      common equity. The logic for returns on book equity follows from the use of original  
21      cost rate base regulation for public utilities which uses a utility's book common equity to  
22      determine the cost of capital. This cost of capital is, in turn, used as the fair rate of return  
23      which is then applied (multiplied) to the book value of rate base to establish the dollar  
24      level of capital costs to be recovered by the utility. This technique is thus consistent with  
25      the rate base methodology used to set utility rates.

26  
27      It can be maintained that the CE standard is easy to calculate and the amount of  
28      subjective judgment required is minimal. The reason is because this method avoids  
29      several of the subjective factors involved in other cost of capital methodologies. For

1 example, the DCF method requires the determination of the growth rate contemplated by  
2 investors, which is a subjective factor. The CAPM requires the specification of several  
3 expectational variables, such as market return and beta. The risk premium method  
4 requires the determination of the expected risk premium, which is a subjective factor. In  
5 contrast, the CE approach makes use of simple readily available accounting data. In fact,  
6 investors are provided with accounting data (i.e., annual reports, Form 10-Ks,  
7 prospectuses) on a more frequent basis than market data.

8  
9 In addition, this method is easily understood and is firmly anchored in regulatory  
10 tradition (i.e., Bluefield and Hope). Furthermore, this method is not influenced by the  
11 regulatory process to the same extent market-based methods such as DCF and CAPM are  
12 influenced. The base to which the comparable earnings standard is applicable is the  
13 utility's book common equity, which is much less vulnerable to regulatory influences than  
14 stock price (which is the base to which the market-based standards are applied).

15  
16 **Q. HOW HAVE YOU EMPLOYED THE CE METHODOLOGY IN YOUR**  
17 **ANALYSIS OF SCE&G's COMMON EQUITY COST?**

18 A. I conducted the CE methodology by examining realized returns on equity for several  
19 groups of companies and evaluating the investor acceptance of these returns by reference  
20 to the resulting market-to-book ratios. In this manner it is possible to assess the degree to  
21 which a given level of return equates to the cost of capital. It is generally recognized for  
22 utilities that market-to-book ratios of greater than one (i.e., 100%) reflect a situation  
23 where a company is able to attract new equity capital without dilution (i.e., above book  
24 value). As a result, one objective of a fair cost of equity is the maintenance of stock  
25 prices above book value.

26  
27 I would further note that the CE analysis, as I have employed it, is based upon market  
28 data (through the use of market-to-book ratios) and is thus essentially a market test. As a  
29 result, my comparable earnings analysis is not subject to the criticisms occasionally made

1 by some who maintain that past earned returns do not represent the cost of capital. In  
2 addition, my comparable earnings analysis uses prospective returns and thus is not  
3 strictly backward looking.  
4

5 **Q. WHAT TIME PERIODS HAVE YOU EXAMINED IN YOUR CE ANALYSIS?**

6 A. My CE analysis considers the experienced equity returns of the comparison groups of  
7 companies for the period 1992-2001 (i.e., last 10 years). The comparable earnings  
8 analysis requires that I examine a relatively long period of time in order to determine  
9 trends in earnings over at least a full business cycle. Further, in estimating a fair level of  
10 return for a future period, it is important to examine earnings over a diverse period of  
11 time in order to avoid any undue influence by unusual or abnormal conditions that may  
12 occur in a single year or shorter period. Therefore, in forming my judgment of the  
13 current cost of equity I have focused on two periods: 1997-2001 (the last five years), and  
14 1992-2001 (the most recent business cycle).  
15

16 **Q. PLEASE DESCRIBE YOUR CE ANALYSIS.**

17 A. Schedule 11 and Schedule 12 contain summaries of experienced returns on equity for  
18 several groups of companies, while Schedule 13 presents a risk comparison of utilities  
19 versus unregulated firms.

20 Schedule 11 shows the earned returns on average common equity and market-to-  
21 book ratios for the two groups of comparison utilities and SCANA. These can be  
22 summarized as follows

<u>Group</u>	<u>Historic</u>		<u>Prospective</u>
	<u>ROE</u>	<u>M/B</u>	<u>ROE</u>
Comparison Group	11.8-12.3%	154-166%	11.5-12.4%
Osborne Comparable Group	12.5-13.2%	169-186%	11.8-14.3%
SCANA	10.7-11.4%	155-160%	11.0-11.5%

28  
29 These results indicate that historic returns of 11.8-13.2 percent have been adequate to  
30 produce market-to-book ratios of 154-186 percent.

1 Furthermore, projected returns on equity for 2002, 2003 and 2005-2007 are within a  
2 range of 11.5 percent to 14.3 percent for the comparison groups. These relate to 2001  
3 market-to-book ratios of 152 percent and higher.  
4

5 **Q. HAVE YOU ALSO REVIEWED EARNINGS OF UNREGULATED FIRMS?**

6 A. Yes. As an alternative, I also examined a group of largely unregulated firms. I have  
7 examined the Standard & Poor's 500 Composite group, since this is a well recognized  
8 group of firms that is widely utilized in the investment community and is indicative of the  
9 competitive sector of the economy. Schedule 12 presents the earned returns on equity  
10 and market-to-book ratios for the S&P 500 group over the past nine years (i.e., 1992-  
11 2000). As this exhibit indicates, over the two periods this group's average earned returns  
12 ranged from 19.6-22.0 percent with market-to-book ratios ranging between 436-546  
13 percent. Over the past nine years market-to-book ratios have increased dramatically,  
14 reflecting a decline in the return levels required by investors. Throughout this period,  
15 market-to-book ratios have been over 271 percent; they exceeded 300 percent in 1995-  
16 2000.  
17

18 **Q. HOW CAN THE ABOVE INFORMATION BE USED TO ESTIMATE THE COST**  
19 **OF EQUITY FOR SCE&G?**

20 A. The recent earnings of the electric utility and S&P 500 groups can be utilized as an  
21 indication of the level of return realized and expected in the regulated and competitive  
22 sectors of the economy. In order to apply these returns to the cost of equity for electric  
23 utilities, however, it is necessary to compare the risk levels of the electric utility industry  
24 with those of the competitive sector. I have done this in Schedule 13 that compares  
25 several risk indicators for the S&P 500 group and the comparison groups.  
26 The information in this schedule indicates that the S&P 500 group is more risky than the  
27 utility comparison groups.  
28  
29

1   **Q.    WHAT RETURN ON EQUITY IS INDICATED BY THE CE ANALYSIS?**

2    A.    Based on the recent earnings and market-to-book ratios, I believe the CE analysis  
3           indicates that the cost of equity for SCE&G is no more than 11 percent. Recent returns of  
4           11.8-13.2 percent have resulted in market-to-book ratios of 154 and greater. Prospective  
5           returns of 11.5-14.3 percent have been accompanied by market-to-book ratios of over 152  
6           percent. As a result, it is apparent that returns below this level would result in market-to-  
7           book ratios of well above 100 percent. An earned return of 11 percent or less should thus  
8           result in a market-to-book ratio of at least 100 percent.

**XI. RETURN ON EQUITY RECOMMENDATION**

**Q. PLEASE SUMMARIZE THE RESULTS OF YOUR THREE COST OF EQUITY ANALYSES.**

A. My three methodologies produce the following results for the electric utility industry, as summarized below:

Discounted Cash Flow	10½ - 11%
Capital Asset Pricing Model	10 -10½%
Comparable Earnings	11%

My overall conclusion from these results is a range of 10 percent to 11 percent.

**Q. WHAT RETURN ON EQUITY DO YOU RECOMMEND FOR SCE&G?**

A. My analyses have indicated a cost of equity for the comparison groups of 10 percent to 11 percent. I have considered the following factors in reaching a conclusion as to how SCE&G's cost of equity should be derived from this range.

First, my cost of equity model results focused on the higher results (i.e., use of upper portion of DCF findings, use of long-term treasury bond yields in CAPM Model) and thus already reflect returns in the upper end of the fair rate of return range.

Second, SCE&G is viewed as an average risk electric utility, relative to the groups of comparison companies.

Based upon these factors, it is my belief that the fair cost of common equity for SCE&G is the 10 percent to 11 percent range for the groups of comparison companies that I have examined. I thus recommend a range of 10 percent to 11 percent.



1 **XII. TOTAL COST OF CAPITAL**

2  
3 **Q. WHAT IS THE TOTAL COST OF CAPITAL FOR SCE&G?**

4 A. Schedule 14 reflects the total cost of capital for the Company using the SCE&G capital  
5 structure, the Company's proposed costs of long-term debt and preferred stock, and my  
6 short-term debt and common equity recommendations. The resulting total cost of capital  
7 is a range of 8.46 percent to 8.96 percent, with a mid-point of 8.71 percent.

8  
9 **Q. DOES YOUR COST OF CAPITAL RECOMMENDATION PROVIDE THE**  
10 **COMPANY WITH A SUFFICIENT LEVEL OF EARNINGS TO MAINTAIN ITS**  
11 **FINANCIAL INTEGRITY?**

12 A. Yes, it does. Schedule 15 shows the pre-tax coverage that would result if SCE&G earned  
13 the mid-point of my cost of capital recommendation. As the results indicate, the mid-  
14 point of my recommended range would produce a coverage level that is near the  
15 benchmark range for an A rated utility. In addition, the debt ratio is consistent with that  
16 of a A rated utility.

1 **XIII. COMMENTS ON COMPANY TESTIMONY**

2  
3 **Q. HAVE YOU REVEIUED THE TESTIMONY OF SCE&G WITNESS BURTON G. MALKIEL?**

4  
5 A. Yes. I have.

6  
7 **Q. WHAT IS YOUR UNDERSTANDING OF DR. MALKIEL'S TESTIMONY AND CONCLUSIONS?**

8  
9 A. Dr. Malkiel uses a DCF model, which he first applies to a group of seven comparable  
10 companies. He also applies his DCF method to a group of eight larger companies.

11  
12 Dr. Malkiel's DCF model results and recommendations can be summarized as follows:

13  
14

	<u>Comparable Group</u>	<u>Larger Group</u>
DCF		
Average	12.35%	11.8%

15  
16  
17

18 His conclusion and recommendation is 12.3 percent, which is derived from his DCF  
19 analysis for his comparable group.

20  
21 I believe that this methodology over-states the cost of common equity for electric utilities  
22 and SCE&G.

23  
24 **Q. WHAT IS YOUR REACTION TO DR. MALKIEL'S DCF METHODOLOGY?**

25  
26 A. Dr. Malkiel's DCF analyses only consider two sets of growth rates with the following  
27 results:

28

<u>Growth Rate</u>	<u>Means</u>
IBES EPS Forecasts	7.7%
First Call EBES Forecasts	7.0%

29  
30  
31

1 In reaching his 12.3 percent DCF recommendation, Dr. Malkiel relied on the two sets of  
2 EPS forecasts.

3  
4 **Q. DO YOU AGREE WITH DR. MALKIEL'S DCF METHODOLOGY AND**  
5 **CONCLUSIONS?**

6 A. No, I do not. I first disagree with his failure to consider DPS growth or any other growth  
7 indicators in his DCF analyses. The DCF model is a "cash flow" model - the cash flow  
8 in the ownership of common stocks is dividends. To maintain that investors give no  
9 consideration to dividends and dividend growth, as Dr. Malkiel implicitly does, is not  
10 consistent with the reality of investment decisions and is not consistent with the DCF  
11 model.

12  
13 The growth factors that Dr. Malkiel does consider are totally comprised of EPS forecasts  
14 of analysis. There are a number of reasons why analysts' forecasts are not appropriate as  
15 the exclusive proxy for investors expectations of common stock growth in a DCF context.

16  
17 First, academic scholarship has challenged the accuracy of analysts' EPS forecasts. A  
18 prominent example is a November/December 1998 article in the Financial Analysts  
19 Journal titled "Why So Much Error in Analysts' Earnings Forecasts?", by Vijay Kumar  
20 Chopra. In this article, the author concluded "Analysts' forecasts of EPS and growth in  
21 EPS tend to be overly optimistic." He concluded that analyst forecasts of EPS over the  
22 past 13 years have been more than twice the actual growth rate.

23  
24 A second source is less academic and more directly in the financial mainstream. On  
25 March 26, 2002, Federal Reserve Chairman Alan Greenspan spoke to an audience at the  
26 Stern School of Business of New York University. In that speech, (available at the  
27 FRB's website: <http://www.federalreserve.gov>), the Chairman addressed the historical  
28 relationships and roles of corporations, financial institutions and brokerage-based  
29 investment analysts:

1 “For the most part, despite providing limited incentives for board  
2 members to safeguard shareholder interest, this paradigm has  
3 worked well. We are fortunate for financial markets have had no  
4 realistic alternative other than to depend on the chief executive  
5 officer to ensure an objective evaluation of the prospects of the  
6 corporation. Apart from a relatively few large institutional  
7 investors, not many existing or potential shareholders have the  
8 research capability to analyze corporate reports and thus to judge  
9 the investment value of a corporation. This vitally important  
10 service has become dominated by firms in the business of  
11 underwriting or selling securities.”  
12

13 “But, as we can see from recent history, **long-term earnings**  
14 **forecasts of brokerage-based securities analysts, on a average,**  
15 **had been persistently overly optimistic.** Three-to five-years  
16 earnings forecasts for each of the S&P 500 corporations, compiled  
17 from projections of securities analysts by **I/B/E/S, averaged**  
18 **almost 12 percent** per year between 1985 and 2001. **Actual**  
19 **earnings growth over the period averaged about 7 percent.”**  
20

21 “Perhaps the last sixteen years for which systematic data have been  
22 available are an historic aberration. But the **persistence** of the **bias**  
23 **year after year** suggests that it more likely results, at least in part,  
24 from the **proclivity** of **firms** that **sell securities** to retain and  
25 promote **analysts** with an **optimistic inclination**. Moreover, the  
26 **bias** apparently has been especially large when the brokerage firm  
27 issuing the forecast also serves as an underwriter for the  
28 company’s securities.”  
29

30 “The performance of securities analysts may improve as a result of  
31 the recent joint initiative by the National Associates of Securities  
32 Dealers and the New York Stock Exchange to require brokerage  
33 firms to include in research reports the distribution of the firms  
34 ratings among “buy,” “sell,” and “hold” for example. Brokerage  
35 firms must also include in research reports a record that indicates  
36 when an analyst assigned of changes a rating for a company.”  
37

38 “I suspect that with the underlying database publicly available, it is  
39 just a matter of time before the ex post results of analysts’  
40 recommendations are compiled and published on a regular basis. I  
41 venture to day that with such transparency, the **current upward**  
42 **bias of analysts’ earnings projections** would diminish rather  
43 rapidly, because investment firms are well aware that security  
44 analysis without credibility has no market value.” **[Emphasis**  
45 **added]**

1  
2 A third source of new insight and perspective is, unfortunately, the well-publicized Enron  
3 and WorldCom debacles. These sagas demonstrate dramatically how analysts are often  
4 either unwilling or incapable of discerning potentially disastrous impacts on a Company's  
5 projected EPS, and how even current earnings can be distorted by the complex financial  
6 machinations of large, aggressive corporations. A dramatic illustration is that, as recent  
7 as 2001, the very year in which Enron toppled and eventually collapsed, IBES EPS  
8 projections for Enron stood at 16.50 percent.

9  
10 Fourth, one of the largest investment firms, Merrill Lynch & Co., recently reached an  
11 agreement with the New York State Attorney General that lifted a court order and  
12 compelled the Company to make significant additional disclosures related to its stock  
13 research activities. One of the bases of the Attorney General's complaint was a belief  
14 that Merrill Lynch has "an inherent conflict of interest." An April 19, 2002 Wall Street  
15 Journal article elaborated, stating that the New York Attorney General accuses Merrill  
16 Lynch of "misleading investors with overly optimistic corporate research that...was  
17 published to help the firm win lucrative investment-banking work." Merrill Lynch  
18 reportedly denies the latter charge, but the firm's agreement to significantly expand its  
19 disclosures regarding the issuance of research reports for the same firms from which it is  
20 receiving investment-banking fees, reflects the recognition that investors have not, in the  
21 past, fully appreciated the potential for an upward bias in analysts forecasts. This and  
22 other, similar investigations and complaints have underscored a growing awareness that  
23 analysts' estimates cannot be considered an unbiased source of growth expectations by  
24 investors, and this has important implications for a DCF analysis that incorporates any  
25 such estimates.

1 **Q. DR. MALKIEL RECOMMENDS A FLOTATION COST ADJUSTMENT THAT**  
2 **RAISES HIS RETURN ON EQUITY RECOMMENDATION FROM 12.3**  
3 **PERCENT TO 12.5%. DO YOU AGREE WITH HIS FLOTATION COST**  
4 **ADJUSTMENT?**

5 A. No, I do not. Dr. Malkiel's flotation cost adjustment, which amounts to a 0.2 percent  
6 addition to the cost of common equity, is based on his belief that flotation costs amount  
7 to 4¼ percent, which is comprised of 4 percent underwriting and investment banking fees  
8 and ¼ percent other costs (legal, accounting, printing, etc.). I disagree with this  
9 adjustment for a number of reasons.

10  
11 First, the 4 ¼ percent level of flotation costs cited by Dr. Malkiel applies only to new  
12 common stock being sold, since it relates directly to underwriting costs and other  
13 issuance-related costs. Yet, he applies this flotation cost to all of SCE&G's common  
14 equity. At the end of 2001, SCE&G had \$1.75 billion of common equity, made up of  
15 \$181 million par value, \$395 million premium, \$470 million other paid-in capital, -\$5  
16 million capital stock expense, and \$709 million retained earnings. Clearly, none of the  
17 \$709 million of retained earnings ever had any flotation costs. In fact, this was provided  
18 by ratepayers through the rates and resulting profits over time. The other items are all  
19 historic and any flotation costs that may have been associated with them are prior to the  
20 test period in this case.

21  
22 Second, the impact of Dr. Malkiel's recommendation, which is 0.2 percent on common  
23 equity and about 0.1 percent on total capital (since common equity is about half of his  
24 proposed capital structure), amounts to an annual charge of about \$3.25 million when it is  
25 applied to the Company's proposed rate base of \$3,257,953,000, plus the tax effect.  
26 Thus, his recommendation amounts to an annual \$4 million charge to ratepayers. No  
27 where in his testimony has he justified an annual \$4 million flotation cost which SCE&G  
28 has or will incur.

1 Third, according to Value Line, the number of shares outstanding for SCANA did not  
2 increase between 1995 and 2001, indicating that the Company did not have any public  
3 offering of common shares during the period. Thus, the Company has apparently not  
4 incurred any flotation costs since 1995, until the October 16, 2002 common equity  
5 offering.

6  
7 Fourth, I do not believe that any flotation cost adjustment is appropriate for a common  
8 stock offering. Unlike long-term debt or preferred stock, which have specific costs (i.e.,  
9 interest or dividend rates) to the company and a finite life, common stock is perpetual and  
10 does not have either a specific cost to the company over its life or a specific return to its  
11 investors over its life. As a result, any flotation costs associated with a common stock  
12 offering are already incorporated in the stock price and are reflected in a company's DCF  
13 or CAPM cost rates. Thus, there is no need for a flotation cost adjustment.

14  
15 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

16 **A.** Yes, it does.

**BACKGROUND AND EXPERIENCE PROFILE**  
**DAVID C. PARCELL, MBA, CRRA**  
**EXECUTIVE VICE PRESIDENT/SENIOR ECONOMIST**

**EDUCATION**

1985	M.B.A., Virginia Commonwealth University
1970	M.A., Economics, Virginia Polytechnic Institute and State University, (Virginia Tech)
1969	B.A., Economics, Virginia Polytechnic Institute and State University, (Virginia Tech)

**POSITIONS**

1995-Present	Executive Vice President and Senior Economist, Technical Associates, Inc.
1993-1995	Vice President and Senior Economist, C. W. Amos of Virginia
1972-1993	Vice President and Senior Economist, Technical Associates, Inc.
1969-1972	Research Economist, Technical Associates, Inc.
1968-1969	Research Associate, Department of Economics, Virginia Polytechnic Institute and State University

**ACADEMIC HONORS**

Omicron Delta Epsilon - Honor Society in Economics  
Beta Gamma Sigma - National Scholastic Honor Society of Business Administration  
Alpha Iota Delta - National Decision Sciences Honorary Society  
Phi Kappa Phi - Scholastic Honor Society

**PROFESSIONAL DESIGNATIONS**

Certified Rate of Return Analyst - Founding Member  
Member of Association for Investment Management and Research (AIMR)

**RELEVANT EXPERIENCE**

Financial Economics -- Advised and assisted many Virginia banks and savings and loan associations on organizational and regulatory matters. Testified approximately 25 times before the Virginia State Corporation Commission and the Regional Administrator of National Banks on matters related to branching and organization for banks, savings and loan associations, and consumer finance companies.

Advised financial institutions on interest rate structure and loan maturity. Testified before Virginia State Corporation Commission on maximum rates for consumer finance companies.

Testified before several committees and subcommittees of Virginia General Assembly on numerous banking matters.

Clients have included First National Bank of Rocky Mount, Patrick Henry National Bank, Peoples Bank of Danville, Blue Ridge Bank, Bank of Essex, and Signet Bank.

Published articles in law reviews and other periodicals on structure and regulation of banking/financial services industry.

Utility Economics -- Performed numerous financial studies of regulated public utilities. Testified in over 300 cases before some thirty state and federal regulatory agencies.



Prepared numerous rate of return studies incorporating cost of equity determination based on DCF, CAPM, comparable earnings and other models. Developed procedures for identifying differential risk characteristics by nuclear construction and other factors.

Conducted studies with respect to cost of service and indexing for determining utility rates, the development of annual review procedures for regulatory control of utilities, fuel and power plant cost recovery adjustment clauses, power supply agreements among affiliates, utility franchise fees, and use of short-term debt in capital structure.

Presented expert testimony before federal regulatory agencies Federal Energy Regulatory Commission, Federal Power Commission, and National Energy Board (Canada), state regulatory agencies in Alabama, Alaska, Arizona, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Missouri, Nebraska, Nevada, New Mexico, Ohio, Oklahoma, Ontario (Canada), Pennsylvania, South Carolina, Texas, Vermont, Virginia, West Virginia, Washington, Wisconsin, and Yukon Territory (Canada).

Published articles in law reviews and other periodicals on the theory and purpose of regulation and other regulatory subjects.

Clients served include state regulatory agencies in Alaska, Arizona, Delaware, Missouri, North Carolina, Ontario (Canada), and Virginia; consumer advocates and attorneys general in Alabama, Arizona, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Maryland, Nevada, New Mexico, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Vermont, Virginia, and West Virginia; federal agencies including Defense Communications Agency, the Department of Energy, Department of the Navy, and General Services Administration; and various organizations such as Bath Iron Works, Illinois Citizens' Utility Board, Illinois Governor's Office of Consumer Services, Illinois Small Business Utility Advocate, Wisconsin's Environmental Decade, Wisconsin's Citizens Utility Board, and Old Dominion Electric Cooperative.

Insurance Economics -- Conducted analyses of the relationship between the investment income earned by insurance companies on their portfolios and the premiums charged for insurance. Analyzed impact of diversification on financial strength of Blue Cross/Blue Shield Plans in Virginia.

Conducted studies of profitability and cost of capital for property/casualty insurance industry. Evaluated risk of and required return on surplus for various lines of insurance business.

Presented expert testimony before Virginia State Corporation Commission concerning cost of capital and expected gains from investment portfolio. Testified before insurance bureaus of Maine, New Jersey, North Carolina, Rhode Island, South Carolina and Vermont concerning cost of equity for insurance companies.

Prepared cost of capital and investment income return analyses for numerous insurance companies concerning several lines of insurance business. Analyses used by Virginia Bureau of Insurance for purposes of setting rates.

Special Studies -- Conducted analyses which evaluated the financial and economic implications of legislative and administrative changes. Subject matter of analyses include returnable bottles, retail beer sales, wine sales regulations, taxi-cab taxation, and bank regulation. Testified before several Virginia General Assembly subcommittees.

Testified before Virginia ABC Commission concerning economic impact of mixed beverage license.

Clients include Virginia Beer Wholesalers, Wine Institute, Virginia Retail Merchants Association, and Virginia Taxicab Association.

Franchise, Merger & Anti-Trust Economics -- Conducted studies on competitive impact on market structures due to joint ventures, mergers, franchising and other business restructuring. Analyzed the costs and benefits to parties involved in mergers. Testified in federal courts and before banking and other regulatory bodies concerning the structure and performance of markets, as well as on the impact of restrictive practices.

Clients served include Dominion Bankshares, asphalt contractors, and law firms.

Transportation Economics -- Conducted cost of capital studies to assess profitability of oil pipelines, trucks, taxicabs and railroads. Analyses have been presented before the Federal Energy Regulatory Commission and Alaska Pipeline Commission in rate proceedings. Served as a consultant to the Rail Services Planning Office on the reorganization of rail services in the U.S.

Economic Loss Analyses -- Testified in federal courts, state courts, and other adjudicative forums regarding the economic loss sustained through personal and business injury whether due to bodily harm, discrimination, non-performance, or anticompetitive practices. Testified on economic loss to a commercial bank resulting from publication of adverse information concerning solvency. Testimony has been presented on behalf of private individuals and business firms.

## MEMBERSHIPS

American Economic Association  
Virginia Association of Economists  
Richmond Society of Financial Analysts  
Financial Analysts Federation  
Society of Utility and Regulatory Financial Analysts  
Board of Directors 1992-2000  
Secretary/Treasurer 1994-1998  
President 1998-2000

## RESEARCH ACTIVITY

### Books and Major Research Reports

"Stock Price As An Indicator of Performance," Master of Arts Thesis, Virginia Tech, 1970

"Revision of the Property and Casualty Insurance Ratemaking Process Under Prior Approval in the Commonwealth of Virginia," prepared for the Bureau of Insurance of the Virginia State Corporation Commission, with Charles Schotta and Michael J. Ileo, 1971

"An analysis of the Virginia Consumer Finance Industry to Determine the Need for Restructuring the Rate and Size Ceilings on Small Loans in Virginia and the Process by which They are Governed," prepared for the Virginia Consumer Finance Association, with Michael J. Ileo, 1973

State Banks and the State Corporation Commission: A Historical Review, Technical Associates, Inc., 1974

"A Study of the Implications of the Sale of Wine by the Virginia Department of Alcoholic Beverage Control", prepared for the Virginia Wine Wholesalers Association, Virginia Retail Merchants Association, Virginia Food Dealers Association, Virginia Association of Chain Drugstores, Southland Corporation, and the Wine Institute, 1983.

"Performance and Diversification of the Blue Cross/Blue Shield Plans in Virginia: An Operational Review", prepared for the Bureau of Insurance of the Virginia State Corporation Commission, with Michael J. Ileo and Alexander F. Skirpan, 1988.

The Cost of Capital - A Practitioners" Guide, Society of Utility and Regulatory Financial Analysts, 1997 (previous editions in 1991, 1992, 1993, 1994, and 1995).

**Papers Presented and Articles Published**

"The Differential Effect of Bank Structure on the Transmission of Open Market Operations," Western Economic Association Meeting, with Charles Schotta, 1971

"The Economic Objectives of Regulation: The Trend in Virginia," (with Michael J. Ileo), William and Mary Law Review, Vol. 14, No. 2, 1973

"Evolution of the Virginia Banking Structure, 1962-1974: The Effects of the Buck-Holland Bill", (with Michael J. Ileo), William and Mary Law Review, Vol. 16, No. 3, 1975

"Banking Structure and Statewide Branching: The Potential for Virginia", William and Mary Law Review, Vol. 18, No. 1, 1976

"Bank Expansion and Electronic Banking: Virginia Banking Structure Changes Past, Present, and Future," William and Mary Business Review, Vol. 1, No. 2, 1976

"Electronic Banking - Wave of the Future?" (with James R. Marchand), Journal of Management and Business Consulting, Vol. 1, No. 1, 1976

"The Pricing of Electricity" (with James R. Marchand), Journal of Management and Business Consulting, Vol. 1, No. 2, 1976

"The Public Interest - Bank and Savings and Loan Expansion in Virginia" (with Richard D. Rogers), University of Richmond Law Review, Vol. 11, No. 3, 1977

"When Is It In the 'Public Interest' to Authorize a New Bank?", University of Richmond Law Review, Vol. 13, No. 3, 1979

"Banking Deregulation and Its Implications on the Virginia Banking Structure," William and Mary Business Review, Vol. 5, No. 1, 1983

"The Impact of Reciprocal Interstate Banking Statutes on The Performance of Virginia Bank Stocks", with William B. Harrison, Virginia Social Science Journal, Vol. 23, 1988

"The Financial Performance of New Banks in Virginia", Virginia Social Science Journal, Vol. 24, 1989

"Identifying and Managing Community Bank Performance After Deregulation", with William B. Harrison, Journal of Managerial Issues, Vol. II, No. 2, Summer 1990

"The Flotation Cost Adjustment To Utility Cost of Common Equity - Theory, Measurement and Implementation," presented at Twenty-Fifth Financial Forum, National Society of Rate of Return Analysts, Philadelphia, Pennsylvania, April 28, 1993.

Biography of Myon Edison Bristow, Dictionary of Virginia Biography, Volume 2, 2001.

**Other**

Editorial Review Board (Industry and Government) for Journal of Managerial Issues, 1992-present.

## ECONOMIC INDICATORS

YEAR	REAL GDP GROWTH	IND PROD GROWTH	UNEMP RATE	CPI	PPI
<b>1975 - 1982 Cycle</b>					
1975	-1.1%	-8.9%	8.5%	7.0%	6.6%
1976	5.4%	10.8%	7.7%	4.8%	3.7%
1977	5.5%	5.9%	7.0%	6.8%	6.9%
1978	5.0%	5.7%	6.0%	9.0%	9.2%
1979	2.8%	4.4%	5.8%	13.3%	12.8%
1980	-0.2%	-1.9%	7.0%	12.4%	11.8%
1981	1.8%	1.9%	7.5%	8.9%	7.1%
1982	-2.1%	-4.4%	9.5%	3.8%	3.6%
<b>1983 - 1991 Cycle</b>					
1983	4.0%	3.7%	9.5%	3.8%	0.6%
1984	6.8%	9.3%	7.5%	3.9%	1.7%
1985	3.7%	1.7%	7.2%	3.8%	1.8%
1986	3.1%	0.9%	7.0%	1.1%	-2.3%
1987	2.9%	4.9%	6.2%	4.4%	2.2%
1988	3.8%	4.5%	5.5%	4.4%	4.0%
1989	3.5%	1.8%	5.3%	4.6%	4.9%
1990	1.8%	-0.2%	5.6%	6.1%	5.7%
1991	-0.5%	-2.0%	6.8%	3.1%	-0.1%
<b>1992 - 2001 Cycle</b>					
1992	3.0%	3.1%	7.5%	2.9%	1.6%
1993	2.7%	3.4%	6.9%	2.7%	0.2%
1994	4.0%	5.5%	6.1%	2.7%	1.7%
1995	2.7%	4.8%	5.6%	2.5%	2.3%
1996	3.6%	4.6%	5.4%	3.3%	2.8%
1997	4.4%	6.9%	4.9%	1.7%	-1.2%
1998	4.3%	5.1%	4.5%	1.6%	0.0%
1999	4.1%	3.7%	4.2%	2.7%	2.9%
2000	3.8%	4.5%	4.0%	3.4%	3.6%
2001	0.3%	-3.9%	4.8%	1.6%	-1.6%
1998					
1st Qtr.	6.1%	4.7%	4.7%	0.1%	-4.4%
2nd Qtr.	2.2%	4.0%	4.4%	2.4%	0.0%
3rd Qtr.	4.1%	0.3%	4.5%	1.6%	0.4%
4th Qtr.	6.7%	0.1%	4.4%	2.0%	1.6%
1999					
1st Qtr.	3.0%	2.8%	4.3%	1.6%	0.4%
2nd Qtr.	2.0%	3.2%	4.3%	2.8%	2.4%
3rd Qtr.	5.2%	3.7%	4.2%	4.0%	6.4%
4th Qtr.	7.1%	4.2%	4.1%	2.4%	0.8%
2000					
1st Qtr.	2.6%	5.8%	4.0%	5.6%	8.4%
2nd Qtr.	4.8%	6.5%	4.0%	2.4%	2.4%
3rd Qtr.	0.6%	5.9%	4.0%	2.4%	2.0%
4th Qtr.	1.1%	4.2%	4.0%	2.4%	2.8%
2001					
1st Qtr.	-0.6%	0.8%	4.2%	4.0%	4.8%
2nd Qtr.	-1.6%	-2.2%	4.5%	3.6%	0.0%
3rd Qtr.	-0.3%	-4.8%	4.8%	0.8%	-0.1%
4th Qtr.	2.7%	-5.9%	5.1%	-2.0%	-9.2%
2002					
1st Qtr.	5.0%	-3.8%	5.6%	2.8%	4.4%
2nd Qtr.	1.1%	-1.2%	5.9%	0.9%	-2.0%

Source: Council of Economic Advisors, Economic Indicators, various issues.

INTEREST RATES

YEAR	PRIME RATE	US TREAS T BILLS 3 MONTH	US TREAS T BONDS 10 YEAR	US TREAS T BONDS 30 YEAR	UTILITY BONDS Aaa	UTILITY BONDS Aa	UTILITY BONDS A	UTILITY BONDS Baa
1975 - 1982 Cycle								
1975	7.86%	5.84%	7.99%	8.19%	9.03%	9.44%	10.09%	10.96%
1976	6.84%	4.99%	7.61%	7.86%	8.63%	8.92%	9.29%	9.82%
1977	6.83%	5.27%	7.42%	7.67%	8.19%	8.43%	8.61%	9.06%
1978	9.06%	7.22%	8.41%	8.49%	8.87%	9.10%	9.29%	9.62%
1979	12.67%	10.04%	9.44%	9.29%	9.86%	10.22%	10.49%	10.96%
1980	15.27%	11.51%	11.46%	11.30%	12.30%	13.00%	13.34%	13.95%
1981	18.89%	14.03%	13.93%	13.44%	14.64%	15.30%	15.95%	16.60%
1982	14.86%	10.69%	13.00%	12.76%	14.22%	14.79%	15.86%	16.45%
1983 - 1991 Cycle								
1983	10.79%	8.63%	11.10%	11.18%	12.52%	12.83%	13.66%	14.20%
1984	12.04%	9.58%	12.44%	12.39%	12.72%	13.66%	14.03%	14.53%
1985	9.93%	7.48%	10.62%	10.79%	11.68%	12.06%	12.47%	12.96%
1986	8.33%	5.98%	7.68%	7.80%	8.92%	9.30%	9.58%	10.00%
1987	8.21%	5.82%	8.39%	8.59%	9.52%	9.77%	10.10%	10.53%
1988	9.32%	6.69%	8.85%	8.96%	10.05%	10.26%	10.49%	11.00%
1989	10.87%	8.12%	8.49%	8.45%	9.32%	9.56%	9.77%	9.97%
1990	10.01%	7.51%	8.55%	8.61%	9.45%	9.65%	9.86%	10.06%
1991	8.46%	5.42%	7.86%	8.14%	8.85%	9.09%	9.36%	9.55%
1992 - 2001 Cycle								
1992	6.25%	3.45%	7.01%	7.67%	8.19%	8.55%	8.69%	8.86%
1993	6.00%	3.02%	5.87%	6.59%	7.29%	7.44%	7.59%	7.91%
1994	7.15%	4.29%	7.09%	7.37%	8.07%	8.21%	8.31%	8.63%
1995	8.83%	5.51%	6.57%	6.88%	7.68%	7.77%	7.89%	8.29%
1996	8.27%	5.02%	6.44%	6.71%	7.48%	7.57%	7.75%	8.16%
1997	8.44%	5.07%	6.35%	6.61%	7.43%	7.54%	7.60%	7.95%
1998	8.35%	4.81%	5.26%	5.58%	6.77%	6.91%	7.04%	7.26%
1999	8.00%	4.66%	5.65%	5.87%	7.21%	7.51%	7.62%	7.88%
2000	9.23%	5.85%	6.03%	5.94%	7.88%	8.06%	8.24%	8.36%
2001	6.91%	3.45%	5.02%	5.49%	7.48%	7.58%	7.76%	8.03%
2000								
Jan	8.50%	5.34%	6.66%	6.63%	7.95%	8.17%	8.35%	8.40%
Feb	8.75%	5.70%	6.52%	6.23%	7.82%	7.99%	8.25%	8.33%
Mar	9.00%	5.72%	6.26%	6.05%	7.87%	7.99%	8.28%	8.40%
Apr	9.00%	5.67%	5.99%	5.85%	7.87%	8.00%	8.29%	8.40%
May	9.50%	5.92%	6.44%	6.15%	8.22%	8.44%	8.70%	8.86%
June	9.50%	5.74%	6.10%	5.93%	7.96%	8.10%	8.36%	8.47%
July	9.50%	5.93%	6.05%	5.85%	8.00%	8.10%	8.25%	8.33%
Aug	9.50%	6.11%	5.83%	5.72%	7.89%	7.95%	8.13%	8.25%
Sept	9.50%	6.00%	5.80%	5.83%	7.92%	8.11%	8.23%	8.32%
Oct	9.50%	6.10%	5.74%	5.80%	7.80%	8.08%	8.14%	8.29%
Nov	9.50%	6.19%	5.72%	5.78%	7.71%	8.03%	8.11%	8.25%
Dec	9.50%	5.83%	5.24%	5.49%	7.51%	7.79%	7.84%	8.01%
2001								
Jan	9.00%	5.27%	5.16%	5.54%	7.53%	7.73%	7.80%	7.99%
Feb	8.50%	4.93%	5.10%	5.45%	7.46%	7.62%	7.74%	7.94%
Mar	8.00%	4.50%	4.89%	5.34%	7.31%	7.51%	7.68%	7.85%
Apr	7.50%	3.92%	5.14%	5.65%	7.53%	7.72%	7.94%	8.06%
May	7.00%	3.67%	5.39%	5.78%	7.61%	7.79%	7.99%	8.11%
June	6.75%	3.48%	5.28%	5.67%	7.50%	7.62%	7.85%	8.02%
July	6.75%	3.54%	5.24%	5.61%	7.46%	7.55%	7.78%	8.05%
Aug	6.50%	3.39%	4.97%	5.48%	7.36%	7.39%	7.59%	7.95%
Sept	6.00%	2.87%	4.73%	5.48%	7.52%	7.55%	7.75%	8.12%
Oct	5.50%	2.22%	4.57%	5.32%	7.45%	7.47%	7.63%	8.02%
Nov	5.00%	1.93%	4.65%	5.12%	7.45%	7.45%	7.57%	7.96%
Dec	4.75%	1.72%	5.09%	5.45%	7.53%	7.53%	7.83%	8.27%
2002								
Jan	4.75%	1.66%	5.04%			7.28%	7.66%	8.13%
Feb	4.75%	1.73%	4.91%			7.14%	7.54%	8.18%
Mar	4.75%	1.81%	5.28%			7.42%	7.76%	8.32%
Apr	4.75%	1.72%	5.21%			7.38%	7.57%	8.26%
May	4.75%	1.74%	5.16%			7.43%	7.52%	8.33%
June	4.75%	1.71%	4.93%			7.33%	7.42%	8.26%
July	4.75%	1.68%	4.65%			7.22%	7.31%	8.07%
Aug	4.75%	1.63%	4.26%			7.10%	7.17%	7.74%
Sept	4.75%	1.66%	3.87%			6.63%	6.73%	7.23%

Sources: Council of Economic Advisors, Economic Indicators; Moody's Bond Record; Federal Reserve Bulletin; various issues.

## STOCK PRICE INDICATORS

YEAR	NYSE INDUST.	NYSE UTILITIES	DJIA	S&P D/P	S&P E/P
<b>1975 - 1982 Cycle</b>					
1975	50.52	63.00	802.49	4.31%	9.15%
1976	60.44	73.94	974.92	3.77%	8.90%
1977	57.86	81.84	894.63	4.62%	10.79%
1978	58.23	78.44	820.23	5.28%	12.03%
1979	64.76	76.40	844.40	5.47%	13.46%
1980	78.70	74.70	891.41	5.26%	12.66%
1981	85.44	77.82	932.92	5.20%	11.96%
1982	78.18	79.50	884.36	5.81%	11.60%
<b>1983 - 1991 Cycle</b>					
1983	107.45	94.00	1,190.34	4.40%	8.03%
1984	108.01	92.89	1,178.48	4.64%	10.02%
1985	123.79	113.49	1,328.23	4.25%	8.12%
1986	155.85	142.72	1,792.76	3.49%	6.09%
1987	195.31	148.59	2,275.99	3.08%	5.48%
1988	180.95	143.53	2,060.82	3.64%	8.01%
1989	216.23	174.87	2,508.91	3.45%	7.41%
1990	225.78	181.20	2,678.94	3.61%	6.47%
1991	258.14	185.32	2,929.33	3.24%	4.79%
<b>1992 - 2001 Cycle</b>					
1992	284.62	198.91	3,284.29	2.99%	4.22%
1993	299.99	228.90	3,522.06	2.78%	4.46%
1994	315.25	209.06	3,793.77	2.82%	5.83%
1995	367.34	220.30	4,493.76	2.56%	6.09%
1996	453.98	249.77	5,742.86	2.19%	5.24%
1997	574.52	283.82	7,441.15	1.77%	4.57%
1998	681.57	378.12	8,625.52	1.49%	3.46%
1999	774.78	473.73	10,464.88	1.25%	3.17%
2000	810.63	477.65	10,734.90	1.15%	3.63%
2001	748.26	377.30	10,189.13	1.32%	2.95%
1998					
1st Qtr.	659.55	347.30	8,280.48	1.55%	3.59%
2nd Qtr.	709.47	376.02	8,996.82	1.44%	3.44%
3rd Qtr.	671.24	377.86	8,495.15	1.49%	3.07%
4th Qtr.	686.03	411.30	8,729.63	1.46%	2.98%
1999					
1st Qtr.	743.19	440.74	9,474.14	1.31%	2.99%
2nd Qtr.	785.51	470.02	10,667.13	1.24%	2.99%
3rd Qtr.	790.70	586.70	10,900.57	1.24%	3.43%
4th Qtr.	784.54	497.47	11,017.68	1.22%	3.28%
2000					
1st Qtr.	793.51	492.57	10,768.86	1.99%	3.40%
2nd Qtr.	819.02	497.29	10,702.50	1.14%	3.57%
3rd Qtr.	830.83	469.59	10,881.78	1.10%	3.74%
4th Qtr.	799.14	451.17	10,586.48	1.17%	3.79%
2001					
1st Qtr.	780.11	420.08	10,512.88	1.24%	3.92%
2nd Qtr.	776.38	399.39	10,668.89	1.27%	3.00%
3rd Qtr.	725.86	357.20	9,933.91	1.37%	2.72%
4th Qtr.	710.67	332.54	9,640.82	1.40%	2.15%
2002					
1st Qtr.	730.38	313.36	10,105.27	1.39%	2.15%
2nd Qtr.	709.47	284.29	9,912.70	1.49%	

Source: Council of Economic Advisors, Economic Indicators, various issues.

**SCANA**  
**SEGMENT FINANCIAL INFORMATION**  
**1997-2001**  
**(\$millions)**

SEGMENT	1997	1998	1999	2000	2001
<b>Operating Revenues</b>					
Electric	\$1,227 58%	\$1,506 56%	\$1,534 58%	\$1,662 41%	\$1,945 45%
Gas Distribution	\$234 11%	\$231 9%	\$239 9%	\$746 18%	\$793 18%
Gas Transmission	\$340 16%	\$330 12%	\$342 13%	\$489 12%	\$479 11%
Retail Gas Marketing	0%	0%	\$207 8%	\$548 14%	\$628 14%
Energy Marketing	\$209 10%	\$568 21%	\$224 9%	\$544 13%	\$439 10%
All Other	\$90 4%	\$77 3%	\$84 3%	\$50 1%	\$57 1%
Total Segments	\$2,100	\$2,712	\$2,630	\$4,039	\$4,341
<b>Operating Income</b>					
Electric	\$280 88%	\$319 90%	\$390 90%	\$446 80%	\$419 79%
Gas Distribution	\$22 7%	\$21 6%	\$22 5%	\$85 15%	\$75 14%
Gas Transmission	\$21 7%	\$20 6%	\$20 5%	\$28 5%	\$16 3%
All Other	-\$4 -1%	-\$5 -1%			\$22 4%
Total Segments	\$319	\$355	\$432	\$559	\$532
<b>Capital Expenditures</b>					
Electric	\$189 65%	\$205 69%	\$201 85%	\$229 69%	\$414 76%
Gas Distribution	\$15 5%	\$19 6%	\$19 8%	\$58 17%	\$90 16%
Gas Transmission	\$18 6%	\$11 4%	\$8 3%	\$18 5%	\$21 4%
Retail Gas Marketing			\$2 1%		\$4 1%
Energy Marketing	0%	\$4 1%	\$1 0%	0%	\$2 0%
All Other	\$70 24%	\$56 19%	\$6 3%	\$27 8%	\$17 3%
Total Segments	\$292	\$295	\$237	\$332	\$548
<b>Identifiable Assets</b>					
Electric	\$4,417 78%	\$4,600 76%	\$4,751 73%	\$4,953 63%	\$5,034 61%
Gas Distribution	\$364 6%	\$381 6%	\$399 6%	\$1,628 21%	\$1,617 20%
Gas Transmission	\$243 4%	\$239 4%	\$253 4%	\$309 4%	\$335 4%
Retail Gas Marketing			-\$24 0%	\$103 1%	\$99 1%
Energy Marketing	\$40 1%	\$73 1%	\$168 3%	\$215 3%	\$96 1%
Telecommunications			\$889 14%	\$599 8%	\$784 10%
All Other	\$614 11%	\$764 13%	\$43 1%	\$86 1%	\$272 3%
Total Segments	\$5,678	\$6,057	\$6,479	\$7,893	\$8,237

Source: Response to Question No. 5-3 of Interrogatories of the Consumer Advocate.

**Exhibit\_\_\_\_(DCP-1)**  
**Schedule 4**

**BOND RATINGS**

Date	SCANA		SCE&G	
	Moody's	S&P	Moody's	S&P
Dec. 31, 1992	A3	A-	A1	A
Dec. 31, 1993	A3	A-	A1	A
Dec. 31, 1994	A3	A-	A1	A
Dec. 31, 1995	A3	A-	A1	A
Dec. 31, 1996	A3	A-	A1	A
Dec. 31, 1997	A3	A-	A1	A
Dec. 31, 1998	A3	A	A1	A+
Feb. 29, 2000	A3	A-	A1	A
Feb. 28, 2001	A3	A-	A1	A
Sept. 25, 2002	A3	BBB+	A1	A-

Source: Response to Question No. 5-4 of Interrogatories of the Consumer Advocate.



**SOUTH CAROLINA ELECTRIC & GAS COMPANY**  
**CAPITAL STRUCTURE RATIOS**  
**1997 - 2002**  
**(\$millions)**

YEAR	COMMON EQUITY	PREFERRED SECURITIES	LONG-TERM DEBT	SHORT-TERM DEBT
1997	\$1,447 49.8% 50.0%	\$169 5.8% 5.8%	\$1,278 44.0% 44.2%	\$13 0.4%
1998	\$1,499 49.9% 52.0%	\$168 5.6% 5.8%	\$1,214 40.4% 42.1%	\$125 4.2%
1999	\$1,558 50.1% 52.6%	\$168 5.4% 5.7%	\$1,238 39.8% 41.8%	\$143 4.6%
2000	\$1,657 50.2% 53.2%	\$167 5.1% 5.4%	\$1,288 39.0% 41.4%	\$188 5.7%
2001	\$1,750 49.7% 52.2%	\$167 4.7% 5.0%	\$1,437 40.8% 42.8%	\$165 4.7%
June 30, 2002	\$1,768 46.8% 49.6%	\$166 4.4% 4.7%	\$1,634 43.2% 45.8%	\$213 5.6%

Note: Percentages may not total 100.0% due to rounding.

Source: Response to Question No. 5-2 of Interrogatories of the Consumer Advocate.

**SCANA**  
**CAPITAL STRUCTURE RATIOS**  
**1997 - 2001**  
**(\$millions)**

YEAR	COMMON EQUITY	PREFERRED SECURITIES	LONG-TERM DEBT	SHORT-TERM DEBT
1997	\$1,788 48.9% 49.7%	\$169 4.6% 4.7%	\$1,639 44.8% 45.6%	\$59 1.6%
1998	\$1,746 45.5% 47.9%	\$168 4.4% 4.6%	\$1,730 45.1% 47.5%	\$195 5.1%
1999	\$2,099 47.7% 50.8%	\$168 3.8% 4.1%	\$1,866 42.4% 45.1%	\$266 6.0%
2000	\$2,032 37.0% 39.9%	\$167 3.0% 3.3%	\$2,891 52.7% 56.8%	\$398 7.3%
2001	\$2,194 37.1% 38.2%	\$167 2.8% 2.9%	\$3,385 57.3% 58.9%	\$165 2.8%
June 30, 2002	\$2,150 36.3% 37.7%	\$166 2.8% 2.9%	\$3,389 57.3% 59.4%	\$213 3.6%

Note: Percentages may not total 100.0% due to rounding.

Source: Response to Question No. 5-2 of Interrogatories of the Consumer Advocate.

**MOODY'S ELECTRIC UTILITY GROUP  
CAPITAL STRUCTURE RATIOS**

YEAR	COMMON EQUITY	PREFERRED STOCK	LONG-TERM DEBT	SHORT-TERM DEBT
1996	45.8%	4.8%	46.3%	3.1%
	47.3%	5.0%	47.8%	
1997	44.9%	4.1%	47.5%	3.5%
	46.5%	4.2%	49.2%	
1998	42.7%	3.3%	47.8%	6.3%
	45.5%	3.5%	51.0%	
1999	39.3%	4.4%	46.0%	10.4%
	43.8%	4.9%	51.3%	
2000	32.4%	1.5%	55.6%	10.5%
	36.2%	1.7%	62.1%	

Source: Mergent Public Utility Manual, 2001 edition, page a23.

## COMPARISON COMPANIES BASIS FOR SELECTION

Company	Market Cap (000)	Percent Revenues Electric	Common Equity Ratio	Value Line Safety	Moody's/ S&P Bond Rating	S&P Business Position
<b>SCANA</b>	\$3,000,000	40%	46%	2	A-/A2	4
<b>Comparison Group*</b>						
EnergyEast	\$3,000,000	70%	38%	2	A/A3	4
Great Plains Energy	\$1,300,000	85%	45%	2	A/A1	6
OGE Energy	\$1,700,000	46%	41%	2	A-/A1	4
Pinnacle West Capital	\$2,800,000	96%	48%	1	A-/A3	3
Pepco Holdings	\$3,500,000	69%	49%	2	A/A2	5

\* Selected using following criteria:  
Market cap of \$1 billion to \$5 billion.  
Electric Revenues of 40% or greater.  
Common Equity Ratio of 35% or greater.  
Value Line Safety of 1 or 2.  
S&P and Moody's bond ratings of A.

Sources: C.A. Turner Utility Reports, Standard & Poor's Stock Guide, Value Line Investment Survey.

**COMPARISON COMPANIES  
DIVIDEND YIELD**

COMPANY	DPS	July - September, 2002 Stock Prices			YIELD
		HIGH	LOW	AVERAGE	
<b>Comparison Group</b>					
EnergyEast	\$0.96	\$22.53	\$15.75	\$19.14	5.0%
Great Plains Energy	\$1.66	\$22.45	\$15.69	\$19.07	8.7%
OGE Energy	\$1.33	\$23.29	\$16.13	\$19.71	6.7%
Pinnacle West Capital	\$1.60	\$39.72	\$25.82	\$32.77	4.9%
Pepco Holdings	\$1.00	\$21.88	\$15.37	\$18.63	5.4%
Average					<b>6.1%</b>
<b>Osborne Comparable Group</b>					
DPL, Inc	\$0.94	\$26.75	\$14.93	\$20.84	4.5%
EnergyEast	\$0.96	\$22.53	\$15.75	\$19.14	5.0%
Great Plains Energy	\$1.66	\$22.45	\$15.69	\$19.07	8.7%
IDACORP, Inc.	\$1.86	\$28.60	\$21.58	\$25.09	7.4%
NSTAR	\$2.12	\$45.17	\$34.00	\$39.59	5.4%
Pinnacle West Capital	\$1.60	\$39.72	\$25.82	\$32.77	4.9%
Vectren Corp.	\$1.06	\$25.44	\$17.95	\$21.70	4.9%
Average					<b>5.8%</b>
<b>SCANA</b>	\$1.30	\$31.26	\$23.50	\$27.38	<b>4.7%</b>

Source: Standard & Poor's Stock Guide.

**COMPARISON COMPANIES  
RETENTION GROWTH RATES**

COMPANY	1997	1998	1999	2000	2001	Average	2002	2003	05-'07	Average
<b>Comparison Group</b>										
EnergyEast	4.4%	5.5%	8.8%	8.0%	7.1%	6.8%	3.5%	5.0%	5.0%	4.5%
Great Plains Energy	0.5%	1.7%	0.0%	2.6%	0.0%	1.0%	2.0%	3.5%	5.5%	3.7%
OGE Energy	2.3%	5.5%	4.7%	4.1%	0.0%	3.3%	1.0%	2.0%	4.5%	2.5%
Pinnacle West Capital	6.9%	6.4%	7.1%	6.8%	7.3%	6.9%	5.5%	5.5%	4.5%	5.2%
Pepco Holdings				9.8%	4.8%	7.3%	6.5%	6.5%	7.0%	6.7%
Average	3.5%	4.8%	5.2%	6.3%	3.8%	<b>5.0%</b>	3.7%	4.5%	5.3%	<b>4.5%</b>
<b>Osborne Comparable Group</b>										
DPL, Inc	3.4%	3.3%	4.2%	8.9%	13.7%	6.7%	0.0%	10.5%	16.0%	8.8%
EnergyEast	4.4%	5.5%	8.8%	8.0%	7.1%	6.8%	3.5%	5.0%	5.0%	4.5%
Great Plains Energy	0.5%	1.7%	0.0%	2.6%	0.0%	1.0%	2.0%	3.5%	5.5%	3.7%
IDACORP, Inc.	2.4%	2.6%	2.9%	7.5%	6.3%	4.3%	0.0%	0.5%	1.5%	0.7%
NSTAR	3.7%	3.9%	2.4%	4.8%	5.0%	4.0%	4.5%	5.5%	6.0%	5.3%
Pinnacle West Capital	6.9%	6.4%	7.1%	6.8%	7.3%	6.9%	5.5%	5.5%	4.5%	5.2%
Vectren Corp.			4.8%	1.5%	0.3%	2.2%	5.0%	5.5%	5.5%	5.3%
Average	3.6%	3.9%	4.3%	5.7%	5.7%	<b>4.5%</b>	2.9%	5.1%	6.3%	<b>4.8%</b>
<b>SCANA</b>	2.4%	3.4%	0.0%	4.8%	4.6%	<b>3.0%</b>	5.0%	5.5%	5.5%	<b>5.3%</b>

Source: Value Line Investment Survey.

## COMPARISON COMPANIES PER SHARE GROWTH RATES

COMPANY	5-Year Historic Growth Rates				Est'd '99-'01 to '05-'07 Growth Rates			
	EPS	DPS	BVPS	Average	EPS	DPS	BVPS	Average
<b>Comparison Group</b>								
EnergyEast	10.0%	2.0%	3.0%	5.0%	2.0%	4.0%	6.5%	4.2%
Great Plains Energy	-1.5%	1.5%	-1.0%	-0.3%	7.5%	0.0%	2.5%	3.3%
OGE Energy	2.0%	0.0%	3.0%	1.7%	2.5%	0.0%	1.5%	1.3%
Pinnacle West Capital	9.0%	9.0%	5.5%	7.8%	2.0%	6.0%	5.5%	4.5%
Pepeco Holdings					5.0%	-3.5%	5.0%	2.2%
Average	4.9%	3.1%	2.6%	<b>3.5%</b>	3.8%	1.3%	4.2%	<b>3.1%</b>
<b>Osborne Comparable Group</b>								
DPL, Inc	7.0%	2.5%	0.5%	3.3%	6.5%	0.5%	2.0%	3.0%
EnergyEast	10.0%	2.0%	3.0%	5.0%	2.0%	4.0%	6.5%	4.2%
Great Plains Energy	-1.5%	1.5%	-1.0%	-0.3%	7.5%	0.0%	2.5%	3.3%
IDACORP, Inc.	8.5%	0.0%	3.5%	4.0%	-5.5%	0.0%	2.0%	-1.2%
NSTAR	5.5%	2.0%	4.0%	3.8%	4.5%	3.0%	2.0%	3.2%
Pinnacle West Capital	9.0%	9.0%	5.5%	7.8%	2.0%	6.0%	5.5%	4.5%
Vectren Corp.					12.0%	3.5%	5.0%	6.8%
Average	6.4%	2.8%	2.6%	<b>3.9%</b>	4.1%	2.4%	3.6%	<b>3.4%</b>
<b>SCANA</b>	0.5%	-3.0%	6.0%	<b>1.2%</b>	8.0%	4.5%	4.5%	<b>5.7%</b>

Source: Value Line Investment Survey.

## COMPARISON COMPANIES DCF COST RATES

COMPANY	ADJUSTED YIELD	HISTORIC RETENTION GROWTH	PROSPECTIVE RETENTION GROWTH	HISTORIC PER SHARE GROWTH	PROSPECTIVE PER SHARE GROWTH	FIRST CALL EPS GROWTH	AVERAGE GROWTH	DCF RATES
<b>Comparison Group</b>								
EnergyEast	5.2%	6.8%	4.5%	5.0%	4.2%	6.5%	5.4%	10.5%
Great Plains Energy	8.8%	1.0%	3.7%	-0.3%	3.3%	4.5%	2.4%	11.2%
OGE Energy	6.8%	3.3%	2.5%	1.7%	1.3%	4.0%	2.6%	9.4%
Pinnacle West Capital	5.0%	6.9%	5.2%	7.8%	4.5%	6.0%	6.1%	11.1%
Pepeco Holdings	5.5%	7.3%	6.7%		2.2%	5.0%	5.3%	10.8%
Average	6.3%	5.0%	4.5%	3.5%	3.1%	5.2%	4.3%	<b>10.6%</b>
Median								<b>10.8%</b>
Composite		11.3%	10.8%	9.8%	<b>9.4%</b>	<b>11.5%</b>	10.6%	
<b>Osborne Comparable Group</b>								
DPL, Inc	4.6%	6.7%	8.8%	3.3%	3.0%	7.0%	5.8%	10.4%
EnergyEast	5.2%	6.8%	4.5%	5.0%	4.2%	6.5%	5.4%	10.5%
Great Plains Energy	8.8%	1.0%	3.7%	-0.3%	3.3%	4.5%	2.4%	11.2%
IDACORP, Inc.	7.5%	4.3%	0.7%	4.0%	-1.2%	8.0%	3.2%	10.7%
NSTAR	5.5%	4.0%	5.3%	3.8%	3.2%	7.0%	4.7%	10.1%
Pinnacle West Capital	5.0%	6.9%	5.2%	7.8%	4.5%	6.0%	6.1%	11.1%
Vectren Corp.	5.0%	2.2%	5.3%		6.8%	7.0%	5.3%	10.4%
Average	6.0%	4.5%	4.8%	3.9%	3.4%	6.6%	4.7%	<b>10.6%</b>
Median								<b>10.5%</b>
Composite		10.5%	10.7%	9.9%	<b>9.4%</b>	<b>12.5%</b>	10.6%	
<b>SCANA</b>	4.8%	3.0% 7.9%	5.3% 10.2%	1.2% <b>6.0%</b>	5.7% <b>10.5%</b>	4.0% 8.8%	3.8% 8.7%	<b>8.7%</b>

Sources: Prior pages of this schedule.



**STANDARD & POOR'S 400 INDUSTRIALS  
RETURN ON AVERAGE COMMON EQUITY**

Year	EPS	BVPS	ROE
1948	\$2.46	\$14.53	
1949	\$2.13	\$15.17	14.34%
1950	\$2.76	\$16.77	17.28%
1951	\$2.52	\$18.66	14.23%
1952	\$2.45	\$20.15	12.63%
1953	\$2.57	\$20.76	12.56%
1954	\$2.69	\$22.09	12.56%
1955	\$3.58	\$25.09	15.18%
1956	\$3.50	\$26.35	13.61%
1957	\$3.53	\$29.44	12.65%
1958	\$2.95	\$30.66	9.82%
1959	\$3.47	\$32.26	11.03%
1960	\$3.40	\$33.74	10.30%
1961	\$3.37	\$34.85	9.83%
1962	\$3.83	\$36.37	10.76%
1963	\$4.24	\$38.17	11.38%
1964	\$4.85	\$40.23	12.37%
1965	\$5.50	\$43.50	13.14%
1966	\$5.87	\$45.59	13.18%
1967	\$5.62	\$47.78	12.04%
1968	\$6.16	\$50.21	12.57%
1969	\$6.13	\$51.70	12.03%
1970	\$5.41	\$52.65	10.37%
1971	\$5.97	\$55.28	11.06%
1972	\$6.83	\$58.34	12.02%
1973	\$8.89	\$62.84	14.67%
1974	\$9.61	\$67.81	14.71%
1975	\$8.58	\$70.84	12.38%
1976	\$10.69	\$76.26	14.53%
1977	\$11.45	\$82.21	14.45%
1978	\$13.04	\$89.34	15.20%
1979	\$16.29	\$98.71	17.33%
1980	\$16.12	\$108.33	15.57%
1981	\$16.74	\$116.06	14.92%
1982	\$13.20	\$118.60	11.25%
1983	\$14.77	\$122.32	12.26%
1984	\$18.11	\$123.99	14.71%
1985	\$15.28	\$125.89	12.23%
1986	\$14.53	\$124.87	11.59%
1987	\$20.28	\$134.19	15.66%
1988	\$26.59	\$139.50	19.43%
1989	\$26.83	\$145.34	18.84%
1990	\$24.77	\$152.71	16.62%
1991	\$16.91	\$157.05	10.92%
1992	\$19.05	\$142.46	12.72%
1993	\$21.93	\$136.91	15.70%
1994	\$32.83	\$150.70	22.83%
1995	\$35.44	\$163.94	22.53%
1996	\$41.15	\$168.04	24.79%
1997	\$42.13	\$174.21	24.62%
1998	\$38.37	\$186.36	21.28%
1999	\$50.25	\$189.54	26.74%
2000	\$53.85	\$204.54	27.33%

**14.86%**

Source: Standard & Poor's Analysts' Handbook.

**COMPARISON COMPANIES  
CAPM COST RATES**

COMPANY	RISK-FREE RATE	BETA	MARKET RETURN	CAPM RATES
<b>Comparison Group</b>				
EnergyEast	5.22%	0.65	13.25%	10.4%
Great Plains Energy	5.22%	0.65	13.25%	10.4%
OGE Energy	5.22%	0.55	13.25%	9.6%
Pinnacle West Capital	5.22%	0.50	13.25%	9.2%
Pepco Holdings	5.22%		13.25%	
Average	5.22%	0.59	13.25%	<b>9.9%</b>
Median				<b>10.0%</b>
<b>Osborne Comparable Group</b>				
DPL, Inc	5.22%	0.75	13.25%	11.2%
EnergyEast	5.22%	0.65	13.25%	10.4%
Great Plains Energy	5.22%	0.65	13.25%	10.4%
IDACORP, Inc.	5.22%	0.55	13.25%	9.6%
NSTAR	5.22%	0.60	13.25%	10.0%
Pinnacle West Capital	5.22%	0.50	13.25%	9.2%
Vectren Corp.	5.22%	0.70	13.25%	10.8%
Average	5.22%	0.63	13.25%	<b>10.3%</b>
Median				<b>10.4%</b>
<b>SCANA</b>	5.22%	0.55	13.25%	<b>9.6%</b>

Sources: Value Line Investment Survey, Standard & Poor's Analysts' Handbook, Federal Reserve.

**COMPARISON COMPANIES  
RATES OF RETURN ON AVERAGE COMMON EQUITY**

COMPANY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	1992-2001 Average	1997-2001 Average	2002	2003	2005-2007
<b>Comparison Group</b>															
EnergyEast	10.7%	9.1%	10.3%	10.5%	10.1%	9.9%	11.2%	14.4%	15.1%	13.4%	11.5%	12.8%	8.5%	10.5%	10.5%
Great Plains Energy	9.8%	12.0%	11.7%	13.4%	11.6%	11.7%	13.2%	8.9%	14.2%	11.6%	11.8%	11.9%	15.5%	14.5%	15.5%
OGE Energy	10.8%	12.4%	13.3%	13.2%	13.8%	13.4%	16.3%	14.9%	14.1%	9.6%	13.2%	13.7%	11.0%	11.5%	14.0%
Pinnacle West Capital	10.7%	10.9%	10.2%	10.6%	11.2%	11.9%	11.5%	12.3%	12.4%	12.8%	11.5%	12.2%	11.0%	10.5%	10.0%
Pepco Holdings	10.6%	12.0%	10.8%	10.5%	11.7%	10.5%	11.3%	11.7%	9.6%	10.7%	10.9%	10.8%	11.5%	11.5%	12.0%
Average	10.5%	11.3%	11.3%	11.6%	11.7%	11.5%	12.7%	12.4%	13.1%	11.6%	11.8%	12.3%	11.5%	11.7%	12.4%
Composite											11.8%	12.3%			
<b>Osborne Comparable Group</b>															
DPL, Inc	13.3%	14.5%	15.1%	15.2%	15.5%	15.4%	14.9%	15.2%	18.6%	25.4%	16.3%	17.9%	14.5%	24.0%	27.5%
EnergyEast	10.7%	9.1%	10.3%	10.5%	10.1%	9.9%	11.2%	14.4%	15.1%	13.4%	11.5%	12.8%	8.5%	10.5%	10.5%
Great Plains Energy	9.8%	12.0%	11.7%	13.4%	11.6%	11.7%	13.2%	8.9%	14.2%	11.6%	11.8%	11.9%	15.5%	14.5%	15.5%
IDACORP, Inc.	9.0%	11.2%	10.1%	11.6%	12.1%	12.4%	12.4%	12.3%	16.7%	14.9%	12.3%	13.7%	6.5%	8.5%	9.5%
NSTAR	11.4%	11.9%	12.2%	10.2%	12.5%	12.6%	12.5%	11.3%	12.3%	13.3%	12.0%	12.4%	13.5%	14.0%	14.0%
Pinnacle West Capital	10.7%	10.9%	10.2%	10.6%	11.2%	11.9%	11.5%	12.3%	12.4%	12.8%	11.5%	12.2%	11.0%	10.5%	10.0%
Vectren Corp.	13.9%	13.9%	13.8%	13.6%	13.4%	13.6%	13.2%	10.9%	10.0%	8.8%	12.5%	11.3%	13.0%	13.0%	13.0%
Average	11.3%	11.9%	11.9%	12.2%	12.3%	12.5%	12.7%	12.2%	14.2%	14.3%	12.5%	13.2%	11.8%	13.6%	14.3%
Composite											12.5%	13.2%			
<b>SCANA</b>	11.0%	13.5%	11.0%	11.5%	13.3%	11.7%	12.6%	7.8%	10.7%	10.7%	11.4%	10.7%	11.0%	11.5%	11.5%

Source: Calculations made from data contained in Value Line Investment Survey.

**COMPARISON COMPANIES  
MARKET TO BOOK RATIOS**

COMPANY	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	1992-2001 Average	1997-2001 Average
<b>Comparison Group</b>												
EnergyEast	131%	143%	105%	96%	94%	108%	169%	186%	151%	131%	131%	149%
Great Plains Energy	160%	173%	151%	168%	181%	198%	209%	178%	173%	185%	178%	189%
OGE Energy	165%	159%	147%	166%	171%	198%	222%	183%	154%	169%	173%	185%
Pinnacle West Capital	116%	125%	99%	116%	133%	152%	180%	143%	145%	154%	136%	155%
Pepco Holdings	160%	162%	135%	138%	161%	151%	161%	166%	143%	133%	151%	151%
Average	146%	152%	127%	137%	148%	161%	188%	171%	153%	154%	<b>154%</b>	<b>166%</b>
Composite											<b>154%</b>	<b>166%</b>
<b>Osborne Comparable Group</b>												
DPL, Inc	177%	206%	196%	213%	214%	221%	231%	215%	314%	404%	239%	277%
EnergyEast	131%	143%	105%	96%	94%	108%	169%	186%	151%	131%	131%	149%
Great Plains Energy	160%	173%	151%	168%	181%	198%	209%	178%	173%	185%	178%	189%
IDACORP, Inc.	155%	172%	146%	148%	168%	177%	177%	158%	189%	185%	168%	177%
NSTAR	138%	154%	130%	129%	124%	146%	181%	166%	161%	161%	149%	163%
Pinnacle West Capital	116%	125%	99%	116%	133%	152%	180%	143%	145%	154%	136%	155%
Vectren Corp.	199%	192%	157%	162%	171%	180%	209%	215%	180%	181%	185%	193%
Average	154%	166%	141%	147%	155%	169%	194%	180%	188%	200%	<b>169%</b>	<b>186%</b>
Composite											<b>169%</b>	<b>186%</b>
<b>SCANA</b>	161%	168%	157%	166%	175%	164%	195%	145%	134%	135%	<b>160%</b>	<b>155%</b>

Source: Calculations made from data contained in Value Line Investment Survey.

**STANDARD & POOR'S 500 COMPOSITE  
RETURNS AND MARKET-TO-BOOK RATIOS  
1992 -2000**

YEAR	RETURN ON AVERAGE EQUITY	MARKET-TO BOOK RATIO
1992	12.2%	271%
1993	14.6%	300%
1994	19.4%	298%
1995	20.2%	325%
1996	21.7%	381%
1997	21.4%	463%
1998	19.1%	551%
1999	23.8%	663%
2000	23.9%	672%
Averages:		
1992-2000	19.6%	436%
1996-2000	22.0%	546%

Source: Standard & Poor's Analyst's Handbook, 2001 edition, page 239.

## RISK INDICATORS

GROUP	VALUE LINE SAFETY	VALUE LINE BETA	VALUE LINE FIN STR	S & P STK RANK
S & P's 500 Composite	2.7	1.05	B++	B+
Comparison Group	1.8	0.59	B++	B+
Osborne Comparable Group	1.7	0.63	B++/A	B+
SCANA	2.0	0.55	A	B+

Sources: Value Line Investment Survey, Standard & Poor's Stock Guide.

### Definitions:

Safety rankings are in a range of 1 to 5, with 1 representing the highest safety or lowest risk.

Beta reflects the variability of a particular stock, relative to the market as a whole. A stock with a beta of 1.0 moves in concert with the market, a stock with a beta below 1.0 is less variable than the market, and a stock with a beta above 1.0 is more variable than the market.

Financial strengths range from C to A++, with the latter representing the highest level.

Common stock rankings range from D to A+, with the later representing the highest level.

**SOUTH CAROLINA ELECTRIC & GAS COMPANY  
TOTAL COST OF CAPITAL**

ITEM	AMOUNT	PERCENT	COST RATE	WEIGHTED COST
Long-Term Debt	\$1,634,041,000	42.82%	7.23%	3.10%
Short-Term Debt	\$99,000,000 (1)	2.59%	1.81%	0.05%
Preferred Stock	\$166,659,100	4.37%	6.80%	0.30%
Common Equity	\$1,916,235,430 (2)	50.22%	10.00%	5.52%
Total	\$3,815,935,530	100.00%		8.46%
				8.96%
				8.71% Mid-point

(1) Actual short-term debt as of March 31, 2002.

(2) Actual common equity as of March 31, 2002, plus addition of \$150 millionn of planned issuance of common stock.

## SOUTH CAROLINA ELECTRIC & GAS COMPANY PRE-TAX COVERAGE

ITEM	PERCENT	COST RATE	WEIGHTED COST	PRE-TAX COST
Long-Term Debt	42.82%	7.23%	3.10%	3.10%
Short-Term Debt	2.59%	1.81%	0.05%	0.05%
Preferred Equity	4.37%	6.80%	0.30%	0.48% (1)
Common Equity	<u>50.22%</u>	10.50%	<u>5.27%</u>	<u>8.57% (1)</u>
 TOTAL CAPITAL	 100.00%		 8.71%	 12.20%

(1) Post-tax weighted cost divided by .61496 (composite tax factor)

Pre-tax coverage =  $12.20 / (3.10\% + 0.05\%)$   
**3.88 X**

Standard & Poor's Utility Benchmark Ratios:

A

Pre-tax coverage (X)  
Business Position:

4

3.3-4.0x

Total Debt to Total Capital (%)  
Business Position

4

43.0-49.5%